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FOR THE FALL AND SPRING SESSIONS

1958 - 1960

Undergraduate Program
Day Sessions

SCRANTON 10, PENNSYLVANIA

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"University of Scranton"
Scranton
Pennsylvania

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CALENDAR 1958-1959

SUMMER SESSION
1958

June 16-21.....Registration for Summer Session
June 23.....Summer Session begins
July 4.....Independence Day—Holiday
July 31.....Feast of St. Ignatius—Holiday
August 15.....Feast of the Assumption—Holiday
August 16.....End of Summer Session

FALL SESSION
1958

September 8.....Fall Semester Registration—Freshmen Orientation
September 9-12.....Fall Semester Registration
September 13.....Fall Semester Registration, Evening Session and Graduate Session
September 12-14.....Freshman Retreat
September 15.....Fall Semester begins
September 19.....Mass of the Holy Ghost—Convocation
September 22.....Last day for late registration or change of program
November 1.....Feast of All Saints—Holiday
November 7.....End of Quarter
November 27-29.....Thanksgiving Holidays
December 8.....Feast of the Immaculate Conception—Holiday
December 13.....Christmas Holidays begin (after last class)

SPRING SESSION
1959

January 5.....Classes Resume
January 19-24.....Semester Examinations
January 26-31.....Semester Vacation—Registration for second semester
February 2.....Spring Semester begins
February 9.....Last day for late registration or change of program
March 3, 4, 5.....Sophomore Testing Program
March 12.....Fifth Annual Military Mass in honor of St. Ignatius
March 25.....Easter Holidays begin (after last class)
April 6.....Classes Resume
April 10.....End of third quarter
April 24-25.....Comprehensive Examinations
April 25.....Last day for submission of Graduate Thesis
May 7.....Ascension Thursday
May 25-29.....Senior Examinations
June 1-5.....Semester Examinations
June 6.....Baccalaureate Mass—Class Day Exercises
June 7.....Commencement

The Registrar's Office is open daily from 9 A.M. to 5 P.M.
On Saturdays it is open from 9 A.M. to 12 noon.

CALENDAR 1959-1960

SUMMER SESSION
1959

June 15-20.....Registration
June 20.....Graduate Classes begin
June 22.....Summer Session begins
July 31.....Feast of St. Ignatius—Holiday
August 14.....End of Summer Session

FALL SESSION
1959

September 8-11.....Registration
September 11-13.....Freshman Retreat
September 14.....Fall Semester begins
September 18.....Mass of the Holy Ghost—Convocation
September 19.....Last day for late registration or change of course
November 6.....End of Quarter
November 26-28.....Thanksgiving Holidays
December 8.....Feast of the Immaculate Conception—Holiday
December 12.....Christmas Holidays begin (after last class)

SPRING SESSION
1960

January 4.....Classes Resume
January 18-23.....Semester Examinations
January 25-30.....Registration—Spring Semester
February 1.....Spring Semester begins
February 8.....Last day for late registration or change of course
February 22.....Washington's Birthday—Holiday
March 1, 2, 3.....Sophomore Testing Program
March 10.....Sixth Annual Military Mass in honor of St. Ignatius
April 1.....End of third quarter
April 13.....Easter Holidays begin (after last class)
April 23.....Last day for submission of Graduate Thesis
April 25.....Classes Resume
April 29-30.....Comprehensive Examinations
May 23-27.....Senior Examinations
May 26.....Ascension Thursday—Holiday
May 30.....Memorial Day—Holiday
May 31-June 3.....Semester Examinations
June 4.....Baccalaureate Mass—Class Day Exercises
June 5.....Commencement

The Registrar's Office is open daily from 9 A.M. to 5 P.M.
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N.B. In order to provide the extended holidays at Christmas and Easter, the regular retreats for Sophomores and Juniors will be held on campus on weekends during the first semester. All Catholic students in Sophomore and Junior years are obliged to make one of these weekend retreats. Senior retreats will be conducted at Tobyhanna Retreat House on weekends during the first semester. Seniors who are Catholics will be obliged to make one of these retreats.

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General Information

HISTORY

The University of Scranton, the first Catholic institution of higher education in the Northeastern counties of Pennsylvania, was known as the College of Saint Thomas at its foundation in 1888. Under the laws of the State it was chartered on January 12, 1924, to confer Bachelor's and Master's degrees in the Arts and Sciences. Fourteen years later Saint Thomas College became the University of Scranton. In 1942 the University of Scranton became the twenty-fourth of the twenty-eight colleges and universities in the United States under the direction of the Society of Jesus.

LOCATION

The University is in process of relocation from its original site on Wyoming Avenue, near the center of the city, to the area of the Scranton Estate which was the generous gift of Mr. Worthington Scranton. Remaining temporarily at the Wyoming Avenue location are the administrative offices and library in Old Main Building and the offices of the President in the adjoining La Salle Hall.

The new Loyola Hall of Science, on the Scranton Estate, houses science laboratories, lecture halls and the radio station. In the same area are the Liberal Arts Building; the Business Administration building, the site of which was donated by Attorney M. J. Martin; the student union building; four student residence halls, and the Jesuit faculty residence. On May 18, 1945, the University acquired title to a tract of land of eight and a half acres, the gift of Mr. E. P. Dietrick; and in 1955, two plots of ground at Quincy Avenue and Linden Street, the gifts of Mr. and Mrs. Nathan B. Epstein and the Scranton Lodge of Elks; three houses on Quincy Avenue were also acquired in 1955, and the late Joseph Casey residence at Clay Avenue and Linden Street.

THE OBJECT AND PURPOSES OF THE UNIVERSITY

The University of Scranton, as one of the family of 28 colleges and universities administered by the Society of Jesus throughout the United States, shares with them their common educational objectives.

The principal objective of the University is: (1) to lead the student to understand and to inspire him to fulfill that complex of dignities and responsibilities which Man is, as a person and as a member of human society, under God; (2) harmoniously to develop all his powers of soul and body, under the influence of Divine Grace, by methods of teaching which will form habits of correct and vigorous thinking, and of courageously effective and virtuous acting.

Specifically, as the university in this community, the University of Scranton has as its purpose to prepare its students to be thoughtful and effective citizens serving their community in careers in the medical, legal and educational professions, in business, industry and commerce, in social and governmental services, as members of the clergy, in communication arts, and in science and research.

Toward the attainment of this end, the University requires that its undergraduate candidates for degree complete studies in language, literature, history and the natural sciences, and fulfill disciplines in scholastic philosophy and theology,* as a necessary cultural foundation upon which study in special fields may be built.

The method of attaining its objective is based upon the *Ratio Studiorum*, the Jesuit Code of Liberal Education, which was first adopted in 1599 after more than thirty years of co-operative experiment and study, and thereafter thoroughly revised from time to time to meet changing needs and conditions, notably in 1832, in 1893, in 1930 and most recently in 1948. This method provides for: (1) clear-cut organization of successive objectives to be obtained by the student; (2) frequent occasion for stimulating the student to organize in his own mind the knowledge he has thus far gained; (3) prevention of any attitude of passivity or mere absorption, by the use of objection and discussion as an essential part of the teaching technique; (4) continual urge to self-expression in accordance with the ideals of intellectual and moral order; (5) personal interest in the student, spurring him on and encouraging him to do his individual best to acquire both learning and virtue.

*Theology required of Catholic students only.

RELIGIOUS TRAINING

No matter how solid and thorough the intellectual training of the student it needs to be supplemented by an equally complete training in religion and morality if education is to fulfill adequately its function of perfecting human nature and thus preparing the student for a fruitful life after leaving college. The more highly trained a man is, the greater his potentialities for good or evil; and consequently the more important the role of religion with its incomparable power to instruct the conscience and to strengthen the will in the ways of private, social and civic virtue.

One of the phases of religious training at the University consists in formal instruction, given during class periods, as an integral part of the curriculum. Since religious truths form a body of doctrine that can be taught and studied as exactly and scientifically as other branches of human knowledge, the courses in religion are conducted as regular lecture courses with recitations and examinations. The courses are so distributed over the four years of college that the entire field of Christian dogma and morals is adequately surveyed.

In addition to the courses in religion, obligatory for all Catholic students, the growth of a spirit of manly piety is encouraged by voluntary participation in various religious devotions and practices. Holy Mass is celebrated in the Chapel; Benediction of the Blessed Sacrament, Devotions to the Sacred Heart and to Our Blessed Lady and other liturgical functions are held at frequent intervals. All Catholic students are expected to receive the Sacraments frequently, weekly and even daily when possible, and to make the exercises of a three day retreat which is held annually.

In the admission of students no discrimination is made on the grounds of religious belief. Students, not of the Catholic faith, are exempted from attending classes in religion and from participating in religious exercises conducted by the University, though they may attend them if they so desire.

THE COUNSELING PROGRAM

One of the characteritic features of Jesuit colleges for many years has been the Student Counselor. His principal duty is to direct the spiritual activities of the University, and the various

religious organizations associated with it. He is, in a special sense, the friend and adviser of the students, not only in religious matters but, also, in their social duties and in other personal matters. The office of the Student Counselor is on the First Floor of the Business Building, and it is open to the students on every class day.

THE GUIDANCE DEPARTMENT

This Department was instituted as a service to the students, to the Faculty, to the Student Counselor, and the Administration, whenever there should be need of its facilities. The Department is staffed by competent, professionally trained men. The Guidance Offices are on the First Floor of the Business Building.

The Guidance Department offers a counseling service on educational, vocational, and personal matters. Students are tested and counseled on their aptitude for college work, on their correct placement in the curriculum, on their reading techniques; they are advised on their capabilities for professional studies, such as, law, engineering, journalism, medicine, etc.; their study habits are diagnosed, arranged into patterns of activity, and remedied, when necessary. In general, the Guidance Department concerns iteself with educational, vocational, and personal problems connected with college life inasmuch as it can by those testing and counseling facilities. A special testing program is offered annually to the students of Freshman and Sophomore year.

The Department has a pre-college, in-college and post-college service for all students. All three involve testing and counseling, the testing being performed by the administration of aptitude, achievement, interest and personality tests. A professionally trained Staff administers, interprets, and evaluates the testing results. Educational guidance is offered by over 30 part-time counselors, who are also members of the University Faculty.

Part of the Department's specialized work involves a diagnostic and remedial reading course for those who either want to enlarge their acquaintance with a wider range of reading techniques, or for those who have had little training thus far, and need to acquire facility for the intense college reading program. Special help is offered also to students suffering from speech defects.

The Department also offers, on a limited scale, testing and counseling services to business and industrial firms in the city.

THE LIBRARY

The Library of the University of Scranton serves the students and the faculty in instructional matters and in research through the existing collection of the main library, located on Wyoming Avenue, and a special collection including many spiritual works housed at the Scranton Estate, 4 Ridge Row. Books from this special collection are available through loan at the main library.

Established in 1926, the main library has a collection of more than 50,000 volumes and upwards of 340 literary, scientific and professional periodicals are currently received. In addition to the University Library, the students may use the resources of the Scranton Public Library and other college libraries in the area.

The staff of well trained librarians is prepared to give individual and informal instruction, so that any student with a special research problem may receive efficient service. It is highly recommended that all students should be aware of the educational and cultural value derived from a thorough acquaintance with the Library collection and tools.

The Main Library, located on the third floor of the Main Building, is open daily during the Fall and Spring semesters from 8:30 A.M. to 9:30 P.M., Monday to Thursday; 8:30 A.M. to 5:00 P.M., Friday; and on Saturdays from 9:00 A.M. to 3:00 P.M. The Library is closed on Sundays and officially designated school holidays. All alumni and friends of the University of Scranton are welcome to use the Library for reference and to borrow books.

BEST SELLERS

The Library of the University of Scranton edits and publishes *Best Sellers*, a book-reviewing service. The purpose of this review is to assist individuals as well as libraries in making an intelligent selection of modern literature. The Reviewing Staff is composed of experts in the various fields of writing and is drawn from more than thirty colleges and universities in the country.

INSTITUTE OF INDUSTRIAL RELATIONS

On October 19, 1943, in Hazleton, Pa., the University of Scranton opened the first unit of its Institute of Industrial Relations. It was called Hazleton Labor College. Later two other divisions were added to the Institute, viz.: the Shenandoah Institute of Industrial Relations in Shenandoah, Pa., which was inaugurated on March 15, 1945, and the Scranton Institute of Industrial Relations, which held its first assembly on May 2, 1945. The Shenandoah and Hazleton divisions were discontinued in 1954.

It is the purpose of all of the divisions of the Institute to provide opportunity for both employees and employers to acquire a sound philosophy in industrial relations, an acquaintance with the methodology of Social Science, a knowledge of the provisions of labor legislation and skill in written and vocal expression. It is hoped that by spreading a better understanding of the underlying principals and factual data of industrial relations the groundwork will be laid for enduring industrial peace.

Lecturers include members of the regular faculty of the University and specially engaged experts in specific fields. The regular courses are supplemented by occasional lectures by members of the staffs of various departments of the Federal Government, of the Commonwealth of Pennsylvania and of labor and employer organizations.

The student body includes international and district officers and board members of labor organizations, officials and committee members and rank and file members of locals; foremen, superintendents, personnel directors and professional persons.

In the Fall of 1954, the Institute broadened its scope of activities to provide educational opportunity for adults other than those interested in the relatively narrow field of Industrial Relations. It now offers short term non-credit courses in English, Literature, Languages, Philosophy, Theology, Psychology, Government. These courses are offered under the title, "Institute for Adult Education."

The classes of the Institute are open to men and women interested in the intricate and specialized field of Industrial Relations. No academic credits are awarded for the courses pursued in the Institute but students who complete a required number of Institute courses are awarded a Certificate of Achievement in Industrial Relations.

Among the courses offered by the Institute are the following:

Basic Economics
Industrial Ethics
Labor Law
Political Parties and Pressure Groups
Parliamentary Procedure
Grievance Procedure
Basic Sociology (The Nature of Society)
Employee Welfare Plans
Causes of Industrial Peace
The Labor Contract
Industrial Psychology
Wages, Prices, Profits
Economic Problems of the Anthracite Region
Collective Bargaining
History and Philosophy of Organized Labor
Effective Writing
Fundamentals of Public Speaking
Argumentation and Debate
International Aspects of Industrial and Labor Relations
Communism, Facism and Democracy
The National Income and Its Distribution
Understanding the American Constitution
The Federal System of Government in the United States
Principles and Practice of Arbitration
Mediation and Conciliation
Statistics and Statistical Methods in Industrial Relations
Speech Analysis

Information regarding the semesters, classes and requirements of the Institute may be had by addressing the Director of the Institute.

RESERVE OFFICERS TRAINING CORPS

The Department of the Army approved the establishment at the University of Scranton of a Branch General Unit of the Reserve Officers Training Corps in September, 1951. It consists of a four-year program with basic courses in the first two years and advanced courses in the last two years. The primary objective of the R.O.T.C. system of education is to qualify selected students to be commissioned reserve officers in the Army of the United States.

Every physically qualified student, who has not completed two years of active duty with some branch of the armed forces, is required to enroll in the basic course, where he may learn the fundamentals of intelligent citizenship and be given such general basic military training as will benefit him and the service when he becomes a member thereof, and finally to afford him a means for practical training in organization, leadership and discipline which will be of value to him in his career. Enrollment in the advanced course is optional. Two credits per semester toward a degree are allowed for basic training and three credits per semester are allowed in the advanced courses. Full particulars concerning the program will be furnished by the Professor of Military Science and Tactics.

PLACEMENT BUREAU

The Placement Bureau was established to render service to all University of Scranton students and alumni who register with the Bureau. Undergraduates and alumni registrants are given every possible assistance in finding satisfactory employment. From time to time, especially during the spring term, employment officers of large corporations arrange through the Placement Bureau to come to the University to interview Seniors with regard to prospective positions with their organizations.

RADIO STATION WUSV

The University of Scranton operates its own non-commercial educational FM broadcast station, WUSV, licensed by the FCC for broadcast on Channel 210, 89.9 mc. WUSV began broadcast operations on October 1, 1950, and has been in continuous operation since. In the autumn of 1956 WUSV moved into new quarters in the penthouse atop the new Science Building on the Scranton Estate, to resume broadcasting with increased power and antenna height. The station operates on a six hour daily schedule beginning at 5:00 P.M.

Admission to the University

REQUIREMENTS FOR ADMISSION

The administration of the requirements for admission to the University of Scranton is in the hands of the Chairman of the Board of Admissions. The executive details are administered by the Registrar, who will furnish application blanks and information to prospective candidates, parents and secondary school principals. It will be to the candidate's advantage to make formal application early in the final year of his secondary school studies. At the very latest application should be made at least two months before the start of the semester.

In the acceptance of candidates final decision rests with the Board of Admissions. Candidates are advised that in determining the admission status of an applicant the Board will consider not only the credits and mental proficiency of the candidate but also such factors as character, personality and good citizenship.

ENTRANCE TESTS

All applicants will be required to submit to a battery of tests to be used by the Board of Admissions in evaluating their qualifications for the course of study for which they are applying. The scores earned in these tests and the relative standing in the applicant's high school class will be the principal factors used in determining his acceptance for admission to the University.

SCHOLASTIC CREDENTIALS

Candidates for admission to the freshman class must present: 1) a certificate of graduation from a senior high school accredited by the State Department of Education of Pennsylvania or by the Association of Colleges and Secondary Schools of the Middle States or other recognized regional accrediting body; and, 2) a detailed record of their high school work.

ADVANCED STANDING

The institution honors credits toward advanced standing from other accredited colleges, provided a grade of "C" or its equivalent is presented. No one, however, will be admitted to a standing higher than that represented by a completion of the junior year. To be eligible for a degree a year of residence is required. Students entering from other institutions shall be required to make up the prescribed subjects of study in the course which they choose to pursue.

The candidate must present a letter of honorable dismissal and a certificate signed by the proper college authority, showing the subjects studied, the number of semester hours given to each subject and the grade attained. In case the character of a student's work in any subject is such as to create doubt as to the quality of that which preceded, the University explicitly reserves the right to revoke any credit assigned on credentials and to exact examination in the same subject.

UNIT REQUIREMENTS FOR ADMISSION

To enroll in any one of the several courses offered in the curriculum a total of sixteen high school units must be presented. The term, "unit," is understood to represent a secondary school course of from four to five hours weekly throughout an academic year of thirty-six weeks duration. Candidates for admission may submit entrance units in the following subjects:

American History	1	Italian	2
Ancient History	1	Spanish	2
Mediaeval History	1	Algebra	2
Modern History	1	Plane Geometry	1
Civics	1	Solid Geometry	1
Economics	1	Trigonometry	1
Problems of Democracy	1	Mechanical Drawing	1
Social Science	1	Business Subjects	2
English	4	General Science	1
Greek	3	Biology	1
Latin	4	Chemistry	1
French	2	Physics	1
German	2		

COURSE REQUIREMENTS

All courses: 16 units, including English 4, *Modern Language 2, Science 1, American History 1, College Preparatory Mathematics 2, others 6. For B.S. in Physical Science, 2 units of Mathematics must be Algebra and Plane Geometry.

Candidates for admission to the Pre-Enginering Course must present two units of Algebra, 1 unit of Plane Geometry, ½ unit of Trigonometry and 1 unit of Physics in addition to the other required units.

* Candidates without secondary school credit in a modern foreign language must register in one of the elementary courses and continue their study of the language during Sophomore Year.

At the beginning of the freshman year a placement test is given to students offering two years or more of high school credit in a modern language. Students passing this test will be admitted to the intermediate course in that language. Students failing in this test, and students admitted with less than two units in a language, are required to take the elementary course in that language.

German is the prescribed language for candidates for the Bachelor of Science Degree in Chemistry and Physics. Students planning post-graduate work on attaining the Bachelor's Degree are advised that French and German are the languages usually required of candidates for advanced degrees.

Examinations and Grades

Final grades are determined by the instructor on the basis of the student's homework, recitations, tests and final comprehensive examination. The standing of students at the quarter is to be ascertained from the instructor. Deficiency warnings will be mailed at the quarter to students doing unsatisfactory work.

All students are required to pass a comprehensive examination in each subject at the close of each semester.

The system of grading is based on the letters A, B, C, D, E and F. These letters are evaluated according to the following scale:

A	indicates not only high achievement, but also a high degree of intellectual iniative and creative work	3 quality points for each credit hour
B	indicates attainment above the average	2 quality points for each credit hour
C	indicates medium or average attainment	1 quality point for each credit hour
D	indicates attainment below average but passing	0 quality points for each credit hour

E — Conditioned Failure. This grade is assigned to a student who, in the opinion of and at the discretion of the instructor and after having completed all semester exercises, narrowly fails to achieve a passing grade; or to the student who, after achieving a passing average in all other semester exercises narrowly fails to achieve a passing grade in the final examination. It is a temporary grade, and after a single condition examination will be replaced on the record by a final grade indicating that the student has passed satisfactorily or that his failure is complete. The highest mark on the condition examination is D. However, the semester grade may be higher. The condition grade must be removed within two weeks from the end of the semester.

F — Complete Failure, with no privilege of re-examination and with the obligation of repeating the course if permitted to remain in attendance.

WX — Withdrew before judgment could be formed.

WF — Withdrew failing.

WP — Withdrew passing.

Inc — Course requirements incomplete. The incomplete grade must be removed by completion of the remaining requirements by the end of the semester after which it has been incurred.

QUALITY OF WORK

A grade average of "C," or a quality point index of 1.0 is required for graduation.

The quality point index of a student is determined by dividing the total number of quality points earned by the total number of credits attempted.

A semester hour of credit represents one hour a week for one semester except when a class period is conducted in the style of a conference or seminar, in which case fewer credits are granted. Two or more hours of laboratory work are counted as the equivalent of one lecture period.

HONOR STUDENTS

To be eligible for honors a student must carry the full program of his class. All semester hours in which a student receives a grade are counted in the determination of honors. In order to be listed as honor students a grade of "B" or higher must be earned in each subject. Names of honor students are placed on the "Dean's List" which is published each semester.

DEFICIENCIES

No student will be classified as a Senior who has not removed all deficiencies or who has not earned the necessary number of quality points. Any member of the Senior Class who incurs one failure or two conditions shall cease to be a candidate for a degree at the next commencement.

A student who has accumulated three failures at the end of a semester shall be dismissed.

RECOMMENDATIONS AND HONORS

1. Favorable recommendations for the purpose of advanced studies will not be issued to any student who does not maintain a quality point average of 1.5 or better in his major field.
2. Honors at graduation are conferred under the following regulations:
   a. To be eligible students must have completed a minimum of 100 hours of work at the University of Scranton.
   b. Honor Averages:

Summa Cum Laude	A quality point average in all subjects of 3.0
Magna Cum Laude	A quality point average in all subjects of 2.5
Cum Laude	A quality point average in all subjects of 2.0

WITHDRAWAL FROM THE UNIVERSITY

A student who withdraws voluntarily from the University of Scranton will be granted an honorable dismissal only under the following conditions:

1. He must not already be liable to dismissal for deficiencies, excessive absence, or misconduct.
2. He must discuss his intention with the Dean, and if so instructed, must submit the request for withdrawal in writing from his parents or guardian.
3. He must have settled all financial accounts with the University.

When a student is granted honorable dismissal, he may request refund of tuition, laboratory fees, and board and room fees, according to the schedule given on page 35. The withdrawal will be effective as of the date on which the notice is received from the parent or guardian.

General Regulations

Students of the University of Scranton, both on campus and off campus, are expected to manifest respect for order, morality, personal honor and the rights of others, which are the sign of a gnetleman and the duty of a good citizen. Unbecoming conduct as well as insubordination, continued inapplication to studies or irregularity in attendance will constitute grounds for dismissal from the University.

The Administration reserves the right to dismiss at any time, and without making public the reason, any student who conducts himself contrary to the standards of the University or, in the opinion of the University authorities, fails to make proper use of the opportunities offered to him.

LATENESS AND ABSENCE

1. *Lateness:* Students will not be admitted to class after the bell signalling the beginning of the class.
2. *Absence:* Regular attendance is one of the most important obligations of the student. Absence beyond twelve percent of classes or laboratories in any course, or absence totalling more than double the number of credits in a given course, will cause the student to be withdrawn from the course or courses and a failure will be recorded in each case.
   a. The above allowance for absence is considered sufficient to cover all extraordinary causes for absence such as illness, death in the family and the like.
   b. Students are not excused from attending class even in the interest of a recognized school activity unless such permission has been given in advance by the Dean of Studies. Application for such permission must be presented to the Dean of Studies in writing and signed by the Moderator of the Activity. It is the policy of the University that such permission rarely be given.
   c. Students who incur the penalty for absenteeism have the right to appeal to the Board of Discipline. The decision of the Board of Discipline as approved by the Dean of Studies is final.

PROPER ATTIRE

Dress proper to the occasion is a hallmark of a gentleman and at the same time an important factor in his formation. At the University of Scranton proper attire includes coat and tie.

PARKING

Certain areas of the campus are reserved for faculty parking. Students may not park in these areas. The grounds of the Scranton Estate also constitute a restricted area. Students who park in these areas are subject to action by the Board of Discipline.

RESIDENCE HALLS

Residence Halls for out-of-town students are provided on campus. All such students are obliged to live in these residences, An exception to this requirement will be made in the case of those out-of-town students who will be living with relatives in Scranton while attending the University. Permission to live outside the residence halls must be obtained from the Dean of Men before the beginning of the school year.

The Residence Hall fee is $287.50 per semester. This is to be paid in advance either by the semester or for the full year. This fee provides for room for the full week and for breakfast and dinner Monday through Friday in the University Cafeteria. Students who remain on campus over the week-end may obtain their meals in any of several restaurants located within walking distance of the University. All inquiries about residence halls should be directed to the Dean of Men.

Students desiring to reserve space in one of the residence halls, must make a room reservation deposit before May 1. This deposit is $25.00 and is not refundable but is applicable to room and board.

Fees listed for residence facilities do not cover the times of calendar vacations. Students are expected to vacate their room at these times.

1958 - 1959

SCHEDULE OF OCCUPANCY FOR RESIDENCE HALLS

September 7	Freshmen occupy their rooms by 8 P.M.
September 12-13-14	Freshmen on retreat at Little Flower Camp.
September 13	Upperclassmen occupy their rooms by 3 P.M.
September 13	Registration for upperclassmen who live in residence halls, 6-9 P.M.
November 27-29	Students may remain on campus but cafeteria facilities will be closed.
December 13	Rooms are to be vacated by 7 P.M. for Christmas Holidays.
January 4	Rooms are to be reoccupied by 8 P.M.
January 24	Semester vacation—rooms to be vacated by 7 P.M.
February 1	Students are to report for reoccupancy of rooms by 6 P.M.
	Special registration for all out-of-town students begins at 7 P.M.
March 25	Easter Holidays—rooms to be vacated by 7 P.M.
April 5	Rooms to be reoccupied by 8 P.M.
June 8	Residence halls close for summer at noon.

1959 - 1960

September 6	Freshmen occupy their rooms by 8 P.M.
September 11-12-13	Freshmen on retreat at Little Flower Camp.
September 12	Upperclassmen occupy their rooms by 3 P.M.
September 12	Registration for upperclassmen who live in residence halls, 3-6 P.M.
November 26-28	Students may remain on campus but cafeteria facilities will be closed.
December 12	Rooms are to be vacated by 7 P.M. for Christmas Holidays.
January 3	Rooms are to be reoccupied by 8 P.M.
January 23	Semester vacation—rooms to be vacated by 7 P.M.
January 31	Students are to report for reoccupancy of rooms by 3 P.M.
	Special registration for all out-of-town students begins at 7 P.M.
April 13	Easter Holidays—rooms to be vacated by 7 P.M.
April 24	Rooms to be reoccupied by 8 P.M.
June 6	Residence halls close for summer at noon.

Student Expenses

Summary of Tuition and Fees

Day Sessions

Tuition per semester	$275.00
Extra Courses per semester hour of credit	18.00
Ordinary Fees	
*University Fee, per semester	25.00
Registration Fee, per semester	7.50
Special Service Fees	
Matricluation Fee (payable once)	5.00
Late Registration Fee	5.00
Supplementary Transcript of Record	1.00
Change of Schedule after registration	1.00
Retreat Fee (Freshmen, Seniors)	15.00
R.O.T.C. Deposit (returnable)	15.00
Condition Examination (per course)	5.00
Locker Rental Fee (per year—.50 refunded on return of key or lock)	2.00
Laboratory Fees	
Each Science Course per semester	15.00
Accounting Laboratory Fee per semester	5.00
Statistics Laboratory Fee per semester	5.00
Education and Psychology Laboratory Fee	5.00
Engineering Laboratory Fee per semester	10.00-15.00
Breakage Fees	actual
For Seniors Only	
Yearbook	15.00
Graduation Fee	30.00

*The University Fee covers extracurricular activities, intramural sports, testing and personnel services, placement service, admission to athletic events, subscription to *The Aquinas*, etc.

Unless explicitly stated otherwise, Tuition and Fees are payable in advance on Registration. No student shall be permitted to receive any degree, certificate or transcript of record, until his financial account with the University has been satisfactorily settled. Students are responsible for all breakage in the laboratories.

The tuition charge permits a student to carry the number of credit hours as indicated for his course and year on pages 39 to 52 of this catalog. Additional credit hours are chargeable at the rate of $18.00 per semester hour of credit. Students whose combined number of credit hours total twelve (12) or more in Day Sessions or in combination of Day and Evening Sessions shall be charged full tuition and fees. Full time day students who have permission to take additional courses in Evening Sessions will be charged at the rate of $18.00 per semester hour of credit for all courses taken. The written permission of the Dean is always required to take courses in both Day and Evening Sessions.

MONTHLY PAYMENTS

We are glad to offer the convenient TUITION PLAN for those parents who prefer to pay tuition, board and room, and other fees in equal monthly installments. The following plans are available at the cost indicated:

One Year Plan	(8 payments)	4% more than cash price
Two Year Plan	(20 payments)	5% more than cash price
Three Year Plan	(30 payments)	6% more than cash price
Four Year Plan	(40 payments)	6% more than cash price

The Two, Three and Four Year Plans include Parent Life Insurance for qualified parents. This insurance coverage provides funds for the estimated cost of the remaining period of schooling covered by the contract, if the parent or guardian who has signed the contract dies. A descriptive pamphlet will be sent upon request.

All contracts made in behalf of students enrolled in Day Sessions must be signed by a parent or guardian.

The TUITION PLAN is optional and offered solely as a convenience.

REFUNDS

No refund may be demanded as a matter of right when a student leaves the University without completing the semester in which he was engaged. If, however, his withdrawal is authorized for a good cause and if he has honorable dismissal, he may request in writing a refund of tuition, board and room fees and laboratory fees, according to the following schedule. Ordinary and special service fees are not refundable.

Period of Attendance	*Refund*
First Semester	
To September 22	80%
To September 29	60%
To October 6	40%
To October 13	20%
Beyond October 13	no refund
Second Semester	
To February 9	80%
To February 16	60%
To February 23	40%
To March 2	20%
Beyond March 2	no refund

College Degrees

The College of Arts and Sciences at the University of Scranton awards four academic degrees, Bachelor of Arts, Bachelor of Science, Master of Arts in Education and in History and Master of Science in Education. The various courses of study are arranged in groups, each one leading to one of these degrees. The Bachelor of Arts course affords the student the opportunity to major in Classical Languages, Education, English, History or Social Sciences. Within the Bachelor of Science group various subdivisions are found depending on whether the student is majoring in Accounting, Business Administration, Biology, Chemistry, Economics, Education, Electronics, English, History, Mathematics, Philosophy, Physics, Political Science, Psychology or Sociology.

BACHELOR OF ARTS DEGREE

The course of studies terminating in a Bachelor of Arts degree is characterized by a two year study of Latin literature. For those majoring in Classics two years of the study of Greek are also required. The student pursuing this course may major in the fields of Classics, English, History, Education, Philosophy, Political Science, Economics, Psychology or Sociology.

BACHELOR OF SCIENCE DEGREE

The courses which lead to the degree of Bachelor of Science fall into three general groups. The pure science courses are designed for students who wish to major in the fields of Biology, Chemistry, Physics, Electronics or Mathematics or who wish to fulfill the requirements for entrance into medical or dental school. The second group of courses enables the student, lacking in prerequisites for the Arts course, to major in the fields of Education, English, Psychology, History, Economics, Philosophy, Political Science or Sociology.

The third group of courses leads to the degree of Bachelor of Science in Business Administration with a major in Accounting or General Business. In all these courses certain general cultural subjects such as English and Philosophy are prescribed.

These fields of study afford a student who has not completed the prerequisites for the A.B. course in high school an opportunity to pursue a course of study which will fit him for graduate work in law, education, business or government.

DEGREE REQUIREMENTS

To receive the Bachelor's degree a student is required to complete successfully all prescribed courses in the curriculum for which he has registered.

PRESCRIBED COURSES

Certain courses are prescribed for all the curricula leading to the bachelor's degree. These include required courses in English, Mathematics and the sequence of Philosophy courses. Each student must also complete a year of advanced language, continuing the modern language which he started in high school. In cases where a student is permitted to take an elementary language course, he will be required to take the advanced course in his Sophomore year. Moreover in all the curricula at least one year of U. S. History and, excepting Accounting, courses in the natural sciences are required. In addition in each of the various curricula certain courses are prescribed as necessary for the minimum requirement for the particular degree awarded upon successful completion of the curriculum. These prescribed courses are outlined in detail in the summaries contained in the following pages. Catholic students are also required to pursue a prescribed course in Theology in each of the four years; non-Catholic students must take an equivalent number of elective credits to substitute for the credits in Theology. Participation in the basic ROTC course is required of all physically fit students who have not served two years of active duty in the Armed Forces of the United States.

MAJOR FIELDS OF STUDY

Before the close of his sophomore year each student with the assistance of his faculty adviser and the approval of the Dean must determine his major elective for the ensuing two years. The field of concentration for students who wish to major in science or to prepare for medical school is normally determined by the course they choose upon entering Freshman year.

In determining the major elective the decisive factor is not the student's desires, but his prospective vocation in life. Consequently what is elective with the student is not so much his studies, especially in details, but rather the career which he wishes to follow. In all cases it is clearly understood that, no matter what a student's major may be, he is still obliged to follow the prescribed courses of Philosophy in Junior and Senior years.

To major a student must present a minimum of six upper division courses (18 to 24 semester hours in the same field).

The major fields of study are:

Accounting
Biology
Business Administration
Chemistry
Classical Languages
Economics
Education
English
History
Mathematics
Philosophy
Physics and Electronics
Political Science
Psychology
Sociology

PRE-LEGAL STUDIES

Applicants interested in the study of law may enroll in either the Bachelor of Arts or Bachelor of Science curriculum. They may major in any of the following fields: Classics, Political Sciences, History, Economics, Sociology, English, Business.

A major in any of the curricula listed above satisfies the requirements of the Pennsylvania State Board of Law Examiners and meets the admission requirements of all accredited law schools. The prospective lawyer is urged to enroll for the Bachelor of Arts if he has three units of high school Latin. If the applicant has not completed three years of Latin he may enroll for any of the other majors indicated.

CURRICULUM TABLES

BACHELOR OF ARTS

Students pursuing the Bachelor of Arts Course may major in Classics, Education, English, History, Political Science, Sociology, Economics or Psychology.

Freshman I

	Credits
English 1, 3	4
Latin 1, 3 or 31	4
Mathematics 7 or Greek 1 or 21	3
Modern Language 21	3
Theology 1	2
Military Science 1	2
	18

Freshman II

	Credits
English 2, 4	4
Latin 2, 4 or 32	4
Mathematics 8 or Greek 2 or 22	3
Modern Language 22	3
Theology 2	2
Military Science 2	2
	18

Sophomore I

English 23	3
Latin 3 or 21	4
Greek 3 or 21 or Biology 3	3
History 1	3
Theology 21	2
Military Science 3	2
	17

Sophomore II

English 24	3
Latin 4 or 22	4
Greek 4 or 22 or Biology 4	3
History 2	3
Theology 22	2
Military Science 4	2
	17

Junior I

Philosophy 101-102	5
Elective	3
Theology 101	2
Electives	6
History 3	3
*(Military Science 5)	
	19

Junior II

Philosophy 103-104	5
Elective	3
Theology 102	2
Electives	6
History 4	3
*(Military Science 6)	
	19

Senior I

Philosophy 105	4
Philosophy 110	4
Theology 110	2
Electives	3
Elective or Military Science 7	3
	16

Senior II

Philosophy 107-108	4
Philosophy 111	4
Theology 111	2
Electives	3
Elective or Military Science 8	3
	16

Total: 140 credits

*Students desiring to take Advanced Military Science must take M.S. 5 and 6 as extra courses in Junior year.

N.B. Special arrangements will be made for those students who wish to complete the Arts program and at the same time complete the requirements for entrance to medical school.

BACHELOR OF SCIENCE

Major in English, History, Political Science, Sociology

FRESHMAN I

	Credits
English 1, 3	4
History 3	3
Mathematics 7	3
Modern Language 21	3
Theology 1	2
Military Science 1	2
	17

FRESHMAN II

	Credits
English 2, 4	4
History 4	3
Mathematics 8	3
Modern Language 22	3
Theology 2	2
Military Science 2	2
	17

SOPHOMORE I

English 23	3
History 1	3
Economics 23	3
Sociology 21	3
Theology 21	2
Military Science 3	2
	16

SOPHOMORE II

English 24	3
History 2	3
Economics 24	3
Sociology 22	3
Theology 22	2
Military Science 4	2
	16

JUNIOR I

Philosophy 101-102	5
Biology 3	3
Elective	3
Theology 101	2
Electives	6
*(Military Science 5)	
	19

JUNIOR II

Philosophy 103-104	5
Biology 4	3
Elective	3
Theology 102	2
Electives	6
*(Military Science 6)	
	19

SENIOR I

Philosophy 105	4
Philosophy 110	4
Theology 110	2
Electives	3
Elective or Military Science 7	3
	16

SENIOR II

Philosophy 107-108	4
Philosophy 111	4
Theology 111	2
Electives	3
Elective or Military Science 8	3
	16

Total: 136 credits

*Students desiring to take Advanced Military Science must take M.S. 5 and 6 as extra courses in Junior year.

BACHELOR OF SCIENCE

Major in Economics

FRESHMAN I	Credits
English 1, 3	4
History 3	3
Mathematics 7	3
Modern Language 21	3
Theology 1	2
Military Science 1	2
	17

FRESHMAN II	Credits
English 2, 4	4
History 4	3
Mathematics 8	3
Modern Language 22	3
Theology 2	2
Military Science 2	2
	17

SOPHOMORE I	
English 23	3
History 1	3
Economics 23	3
Sociology 21	3
Theology 21	2
Military Science 3	2
	16

SOPHOMORE II	
English 24	3
History 2	3
Economics 24	3
Sociology 22	3
Theology 22	2
Military Science 4	2
	16

JUNIOR I	
Philosophy 101-102	5
Biology 3	3
Theology 101	2
Economics 25	2
Economics 104	3
Business 105	3
*(Military Science 5)	
	18

JUNIOR II	
Philosophy 103-104	5
Biology 4	3
Theology 102	2
Economics 26	2
Economics 103	3
Business 106	3
*(Military Science 6)	
	18

SENIOR I	
Philosophy 105	4
Philosophy 110	4
Theology 110	2
Economics 102	3
Economics 105 or Military Science 7	3
Business 103	3
	19

SENIOR II	
Philosophy 107-108	4
Philosophy 111	4
Theology 111	2
Economics 150	3
Economics 106 or Military Science 8	3
Business 104	3
	19

Total: 140 credits

*Students desiring to take Advanced Military Science must take M.S. 5 and 6 as extra courses in Junior year.

BACHELOR OF SCIENCE

Major in Education

FRESHMAN I	Credits	FRESHMAN II	Credits
English 1, 3	4	English 2, 4	4
History 3	3	History 4	3
Mathematics 7	3	Mathematics 8	3
Modern Language 21	3	Modern Language 22	3
Theology 1	2	Theology 2	2
Military Science 1	2	Military Science 2	2
	17		17
SOPHOMORE I		**SOPHOMORE II**	
English 23	3	English 24	3
History 1	3	History 2	3
Sociology 21	3	Sociology 22	3
Theology 21	2	Theology 22	2
Military Science 3	2	Military Science 4	2
Education 21	3	Education 22	3
	16		16

Secondary Education

JUNIOR I		JUNIOR II	
Philosophy 101-102	5	Philosophy 103-104	5
Theology 101	2	Theology 102	2
Electives	9	Electives	9
Biology 3	3	Biology 4	3
*(Military Science 5)		*(Military Science 6)	
	19		19
SENIOR I		**SENIOR II**	
Philosophy 105	4	Philosophy 107-108	4
Philosophy 110	4	Philosophy 111	4
Theology 110	2	Theology 111	2
Education 103	3	Education 105	6
Education 104	3	Electives or Military Science 8	3
Electives or Military Science 7	3		19
	19		

Elementary Education

JUNIOR I		JUNIOR II	
Philosophy 101-102	5	Philosophy 103-104	5
Theology 101	2	Theology 102	2
Biology 3	3	Biology 4	3
Education 120	3	Education 124	3
Education 121	3	Education 122	3
Education 125	3	Education 123	3
*(Military Science 5)		*(Military Science 6)	
	19		19
SENIOR I		**SENIOR II**	
Philosophy 105	4	Philosophy 107-108	4
Philosophy 110	4	Philosophy 111	4
Theology 110	2	Theology 111	2
Education 126 or		Education 128	8
Military Science 7	3	*Military Science 8	3
Education 127	3		
	16		18(21)

*Students desiring to take Advanced Military Science must take M.S. 5 and 6 as extra courses in Junior year.

BACHELOR OF SCIENCE

Major in Psychology

FRESHMAN I	Credits
English 1, 3	4
History 3	3
Mathematics 7	3
Modern Language 21	3
Theology 1	2
Military Science 1	2
	17

FRESHMAN II	Credits
English 2, 4	4
History 4	3
Mathematics 8	3
Modern Language 22	3
Theology 2	2
Military Science 2	2
	17

SOPHOMORE I	
English 23	3
History 1	3
Economics 23	3
Sociology 21	3
Theology 21	2
Military Science 3	2
	16

SOPHOMORE II	
English 24	3
Economics 24	3
History 2	3
Sociology 22	3
Theology 22	2
Military Science 4	2
	16

JUNIOR I	
Philosophy 101-102	5
Biology 3	3
Theology 101	2
Psychology 121	3
Psychology 123	3
Education 101	3
*(Military Science 5)	
	19

JUNIOR II	
Philosophy 103-104	5
Biology 4	3
Theology 102	2
Psychology 122	3
Education 22	3
Psychology 129	3
*(Military Science 6)	
	19

SENIOR I	
Philosophy 105	4
Philosophy 110	4
Theology 110	2
Education 121 or Military Science 7	3
Psychology 126	3
	16

SENIOR II	
Philosophy 107-108	4
Philosophy 111	4
Theology 111	2
Psychology Elective or Military Science 8	3
Psychology 125	3
	16

Total: 136 credits

*Students desiring to take Advanced Military Science must take M.S. 5 and 6 as extra courses in Junior year.

BACHELOR OF SCIENCE

Major in Biology

PRE-MEDICAL AND PRE-DENTAL COURSE

FRESHMAN I

	Credits
Chemistry 1	4
English 1, 3	4
Mathematics 13	4
Modern Language 21	3
Theology 1	2
Military Science 1	2
	19

FRESHMAN II

	Credits
Chemistry 2	4
English 2, 4	4
Mathematics 14	4
Modern Language 22	3
Theology 2	2
Military Science 2	2
	19

SOPHOMORE I

Biology 1	4
English 23	3
Physics 1	4
Theology 21	2
Military Science 3	2
Chemistry 22	4
	19

SOPHOMORE II

Biology 2	4
English 24	3
Physics 2	4
Theology 22	2
Military Science 4	2
Sociology 22	3
	18

JUNIOR I

Philosophy 101-102	5
History 1	3
Theology 101	2
Chemistry 101	4
Biology 21	4
*(Military Science 5)	
	18

JUNIOR II

Philosophy 103-104	5
History 2	3
Theology 102	2
Chemistry 102	4
Biology 22	4
*(Military Science 6)	
	18

SENIOR I

Philosophy 105	4
Philosophy 110	4
Theology 110	2
Biology 120 or Military Science 7..	4
Biology 103	4
	18

SENIOR II

Philosophy 107-108	4
Philosophy 111	4
Theology 111	2
Biology 121 or Military Science 8..	4
Biology 105	4
	18

Total: 147 credits

*Students desiring to take Advanced Military Science must take M.S. 5 and 6 as extra courses in the Junior year.

BACHELOR OF SCIENCE

Major in Chemistry

FRESHMAN I

	Credits
Chemistry 1	4
English 1, 3	4
Mathematics 13	4
Modern Language 21	3
Theology 1	2
Military Science 1	2
	19

FRESHMAN II

	Credits
Chemistry 2	4
English 2, 4	4
Mathematics 14	4
Modern Language 22	3
Theology 2	2
Military Science 2	2
	19

SOPHOMORE I

Chemistry 22	4
English 23	3
Mathematics 21	4
Physics 11	4
Theology 21	2
Military Science 3	2
	19

SOPHOMORE II

Chemistry 125	3
English 24	3
Mathematics 22	4
Physics 12	4
Theology 22	2
Military Science 4	2
	18

JUNIOR I

Philosophy 101-102	5
History 1	3
Theology 101	2
Chemistry 101	4
Chemistry 123	4
*(Military Science 5)	
	18

JUNIOR II

Philosophy 103-104	5
History 2	3
Theology 102	2
Chemistry 102	4
Chemistry 124	4
*(Military Science 6)	
	18

SENIOR I

Philosophy 105	4
Philosophy 110	4
Theology 110	2
Chemistry Electives	4
Elective or Military Science 7	3
	17

SENIOR II

Philosophy 107-108	4
Philosophy 111	4
Theology 111	2
Chemistry Electives	4
Elective or Military Science 8	3
	17

Total: 145 credits

Electives:

Chemistry 103	Chemistry 126
Chemistry 127	Chemistry 130
Chemistry 129	Chemistry 132

*Students desiring to take Advanced Military Science must take M.S. 5 and 6 as extra courses in Junior year.

BACHELOR OF SCIENCE

Major in Mathematics

FRESHMAN I

	Credits
Chemistry 1	4
English 1, 3	4
Mathematics 13	4
Modern Language 21	3
Theology 1	2
Military Science 1	2
	19

FRESHMAN II

	Credits
Chemistry 2	4
English 2, 4	4
Mathematics 14	4
Modern Language 22	3
Theology 2	2
Military Science 2	2
	19

SOPHOMORE I

Physics 11	4
English 23	3
Mathematics 21	4
History 1	3
Theology 21	2
Military Science 3	2
	18

SOPHOMORE II

Physics 12	4
English 24	3
Mathematics 22	4
History 2	3
Theology 22	2
Military Science 4	2
	18

JUNIOR I

Philosophy 101-102	5
Physics 106	4
Theology 101	2
Mathematics 101	4
Mathematics 104 or 109	3
*(Military Science 5)	
	18

JUNIOR II

Philosophy 103-104	5
Physics 107	4
Theology 102	2
Mathematics 102	3
Mathematics 103 or 108	3
*(Military Science 6)	
	17

SENIOR I

Philosophy 105	4
Philosophy 110	4
Theology 110	2
Mathematics 106	3
Mathematics 104 or 109 or Military Science 7	3
	16

SENIOR II

Philosophy 107-108	4
Philosophy 111	4
Theology 111	2
Mathematics 107	3
Mathematics 103 or 108 or Military Science 8	3
	16

Total: 141 credits

*Students desiring to take Advanced Military Science must take M.S. 5 and 6 as extra courses in Junior year.

BACHELOR OF SCIENCE

Major in Physics

FRESHMAN I	Credits
Chemistry 1	4
English 1, 3	4
Mathematics 13	4
Modern Language 21	3
Theology 1	2
Military Science 1	2
	19

FRESHMAN II	Credits
Chemistry 2	4
English 2, 4	4
Mathematics 14	4
Modern Language 22	3
Theology 2	2
Military Science 2	2
	19

SOPHOMORE I	
Physics 11	4
English 23	3
Mathematics 21	4
History 1	3
Theology 21	2
Military Science 3	2
	18

SOPHOMORE II	
Physics 12	4
English 24	3
Mathematics 22	4
History 2	3
Theology 22	2
Military Science 4	2
	18

JUNIOR I	
Philosophy 101-102	5
Mathematics 101	4
Theology 101	2
Physics 103	4
Physics 110-114 or 104	4
*(Military Science 5)	
	19

JUNIOR II	
Philosophy 103-104	5
Mathematics 102	3
Theology 102	2
Physics 102	3
Physics 111-115 or 105	4
*(Military Science 6)	
	17

SENIOR I	
Philosophy 105	4
Philosophy 110	4
Theology 110	2
Physics 104 or 110-114	4
Mathematics 106 or Military Science 7	3
	17

SENIOR II	
Philosophy 107-108	4
Philosophy 111	4
Theology 111	2
Physics 105 or 111-115	4
Mathematics 107 or Military Science 8	3
	17

Total: 144 credits

*Students desiring to take Advanced Military Science must take M.S. 5 and 6 as extra courses in the Junior year.

BACHELOR OF SCIENCE

Major in Electronics

FRESHMAN I

	Credits
Chemistry 1	4
English 1, 3	4
Mathematics 13	4
Modern Language 21	3
Theology 1	2
Military Science 1	2
	19

FRESHMAN II

	Credits
Chemistry 2	4
English 2, 4	4
Mathematics 14	4
Modern Language 22	3
Theology 2	2
Military Science 2	2
	19

SOPHOMORE I

Physics 11	4
English 23	3
Mathematics 21	4
History 1	3
Theology 21	2
Military Science 3	2
	18

SOPHOMORE II

Physics 12	4
English 24	3
Mathematics 22	4
History 2	3
Theology 22	2
Military Science 4	2
	18

JUNIOR I

Philosophy 101-102	5
Mathematics 101	4
Theology 101	2
Engin. 101	4
Physics 106	4
*(Military Science 5)	
	19

JUNIOR II

Philosophy 103-104	5
Mathematics 110	3
Theology 102	2
Physics 104E	4
Physics 107	4
*(Military Science 6)	
	18

SENIOR I

Philosophy 105	4
Philosophy 110	4
Theology 110	2
Physics 103 or Military Science 7	4-3
Physics 108	4
	18-17

SENIOR II

Philosophy 107-108	4
Philosophy 111	4
Theology 111	2
Physics 109	4
Physics 112 or Military Science 8	3
	17

Total: 146 credits

*Students desiring to take Advanced Military Science must take M.S. 5 and 6 as extra courses in the Junior year.

PRE-ENGINEERING

FRESHMAN I	Credits	FRESHMAN II	Credits
Engineering 13	3	Physics 18	4
*Mathematics 13 or 14	4	Mathematics 14 or 21	4
Chemistry 1	4	Chemistry 2	4
English 1, 3	4	English 2, 4	4
Theology 1	2	Theology 2	2
Military Science 1	2	Military Science 2	2
	19		20
†Engineering Elective (Surveying or Materials)	3	Engineering 24	3
Mathematics 21 or 22	4	Mathematics 22 or 101	4
Physics 19	4	Physics 20	4
English 23	3	English 24	3
Theology 21	2	Theology 22	2
Military Science 3	2	Military Science 4	2
	18		18

*Those students who demonstrate proficiency in algebra and trigonometry will begin their mathematics sequence with Mathematics 14.

†Civil Engineers take Surveying, others optional.

Students who are not required to take Military Science or Theology may take a general study subject, such as history.

Students with 1.5 quality point average or better may take Engineering 21 and 22 or Chemistry 22 and 125 as additional courses. They will be charged for these courses in accord with the catalog regulations concerning extra courses.

BACHELOR OF SCIENCE

Major in Accounting

FRESHMAN I

	Credits
English 1, 3	4
Business 1	4
Modern Language 21	3
Theology 1	2
Military Science 1	2
Mathematics 7	3
	18

FRESHMAN II

	Credits
English 2, 4	4
Business 2	4
Modern Language 22	3
Theology 2	2
Military Science 2	2
Mathematics 8	3
	18

SOPHOMORE I

English 23	3
Business 5	2
Business 21	2
Economics 23	3
Theology 21	2
Military Science 3	2
History 1	3
	17

SOPHOMORE II

English 24	3
Business 6	2
Business 22	2
Economics 24	3
Theology 22	2
Military Science 4	2
History 2	3
	17

JUNIOR I

Philosophy 101-102	5
Business 101	4
Business 103	3
Theology 101	2
Business 25	2
Business 105	3
*(Military Science 5)	
	19

JUNIOR II

Philosophy 103-104	5
Business 102	4
Business 104	3
Theology 102	2
Business 26	2
Business 106	3
*(Military Science 6)	
	19

SENIOR I

Philosophy 105	4
Philosophy 110	4
Theology 110	2
Business 120-121	4
Business 126-7 or Military Science 7	4
	18

SENIOR II

Philosophy 107-108	4
Philosophy 111	4
Theology 111	2
Business 122-123	6
Military Science 8	3
	16-19

Total: 142 credits

*Students desiring to take Advanced Military Science must take M.S. 5 and 6 as extra courses in Junior year.

BACHELOR OF SCIENCE

Major in Business Management

FRESHMAN I

	Credits
English 1, 3	4
Business 1	4
Modern Language 21	3
Theology 1	2
Military Science 1	2
Mathematics 7	3
	18

FRESHMAN II

	Credits
English 2, 4	4
Business 2	4
Modern Language 22	3
Theology 2	2
Military Science 2	2
Mathematics 8	3
	18

SOPHOMORE I

English 23	3
Business 5	2
Economics 23	3
History 1	3
Theology 21	2
Military Science 3	2
Biology 3	3
	18

SOPHOMORE II

English 24	3
Business 6	2
Economics 24	3
History 2	3
Theology 22	2
Military Science 4	2
Biology 4	3
	18

JUNIOR I

Philosophy 101-102	5
Business 103	3
Business 107	4
Business 25	2
Theology 101	2
Business 105	3
*(Military Science 5)	
	19

JUNIOR II

Philosophy 103-104	5
Business 104	3
Business 108	4
Business 26	2
Theology 102	2
Business 106	3
*(Military Science 6)	
	19

SENIOR I

Philosophy 105	4
Philosophy 110	4
Theology 110	2
Business 126-127	4
Business 170 or Military Science 7	3
	17

SENIOR II

Philosophy 107-108	4
Philosophy 111	4
Theology 111	2
Business 171 or Military Science 8	3
Business 172	3
	16

Total: 143 credits

*Students desiring to take Advanced Military Science must take M.S. 5 and 6 as extra courses in Junior year.

BACHELOR OF SCIENCE

Major in Business Statistics

FRESHMAN I

	Credits
English 1, 3	4
Business 1	4
Modern Language 21	3
Theology 1	2
Military Science 1	2
Mathematics 7	3
	18

FRESHMAN II

	Credits
English 2, 4	4
Business 2	4
Modern Language 22	3
Theology 2	2
Military Science 2	2
Mathematics 8	3
	18

SOPHOMORE I

English 23	3
Business 5	2
Economics 23	3
History 1	3
Theology 21	2
Military Science 3	2
Biology 3	3
	18

SOPHOMORE II

English 24	3
Business 6	2
Economics 24	3
History 2	3
Theology 22	2
Military Science 4	2
Biology 4	3
	18

JUNIOR I

Philosophy 101-102	5
Business 103	3
Business 107	4
Business 25	2
Theology 101	2
Business 105	3
*(Military Science 5)	
	19

JUNIOR II

Philosophy 103-104	5
Business 104	3
Business 108	4
Business 26	2
Theology 102	2
Business 106	3
*(Military Science 6)	
	19

SENIOR I

Philosophy 105	4
Philosophy 110	4
Theology 110	2
Business 126-127	4
Business 173 or Military Science 7	3
	17

SENIOR II

Philosophy 107-108	4
Philosophy 111	4
Theology 111	2
Business 175 or Military Science 8	3
Business 174 or 165	3
	16

Total: 143 credits

*Students desiring to take Advanced Military Science must take M.S. 5 and 6 as extra courses in Junior year.

Courses of Instruction

DEPARTMENT OF FINE ARTS

Mr. Mann, Mr. Gallagher

The Courses in Fine Arts are designed to fulfill a two-fold purpose: 1) to provide instruction in applied art for students desirous of learning to draw and paint and for those who seek professional advancement in commercial art; 2) to provide a cultural background, appreciative and historical, affording a knowledge of canons for criticism and enjoyment, for students of all courses. At present the Department does not offer a major or minor program.

Art 5. *Art Appreciation* — *3 credits*

A survey course devoted to the interpretation and appreciation of architecture, sculpture and painting. Egypt and Mesopotamia. Aegean civilization. Greece and Rome. Early Christian and Byzantine art. Romanesque and Gothic art.
Fall 1958

Art 6. *Art Appreciation* — *3 credits*

A continuation of Art. 5. Renaissance architecture and sculpture. Italian schools of painting. Baroque art. Painting in the Low Countries and England. French painting from classicism to post-impressionism. Modern painting illustrated by cubism, non-objectivism, expressionism and surrealism.
Spring 1959

Art 7. *Music Appreciation* — *3 credits*

This course is designed to present such information as is necessary for the intelligent enjoyment of the various forms of music. It includes a survey of musical history from the ancient period, including the ancient Greek, through the transition from the Greek to the early Christian Church and the Medieval period.
Fall 1959

Art 8. *Music Appreciation* — *3 credits*

A continuation of Music 7. Treats the musical history of the fifteenth century and the rise of the national schools; instruments and instrumental music, the Romantic period, the twentieth century and music in America.
Spring 1960

DEPARTMENT OF BIOLOGY

Dr. Wolf, *Chairman*; Mr. Callaghan, Dr. Evans

Courses in the Department of Biology are designed to achieve the following objectives: 1. To further the general education of the individual by presenting the fundamental facts and concepts which are needed for an understanding of the living world and his relations to it. 2. To train the individual in

analytical thinking and to acquaint him with the operation of the "scientific method." 3. To develop habits of precision, accuracy, curiosity, critical evaluation, neatness and patience together with skill in laboratory techniques. 4. To prepare students for professional schools such as those of Medicine, Dentistry and allied fields or for advanced study or work in other biological fields.

Biol. 1 & 2. *General Biology* *8 credits*

This course includes a comprehensive study of representatives of the major plant and animal phyla from the standpoint of structure, function, development and relationships. It also considers such general biological principles as the nature and origin of life, the organization of living beings, the problems of heredity, development and evolution. It is the equivalent of one semester courses in General Botany and General Zoology. 2 hours lecture and 4 hours lab each semester.
Fall and Spring each year

Biol. 3 & 4. *General Biological Sciences* *6 credits*

This is a cultural course in which general biological principles and problems are emphasized especially as they affect the human race and in relation to human problems. It covers, in less detail, the same subject matter as the preceding course and aims at the inculcation of a more generalized knowledge of the major biological principles. Demonstrations are used extensively to supplement laboratory work. 2 hours lecture and 2 hours lab each semester.
Fall and Spring each year

Biol. 21 & 22. *Comparative Vertebrate Anatomy* *8 credits*

The gross anatomy and phylogeny of the organ systems in the vertebrate organism are considered with special emphasis given to the mammal. Insofar as possible structure is correlated with function. Type animals of the major vertebrate groups studied and dissected in the laboratory include, shark, necturus, turtle, pigeon and cat. 2 hours lecture and 4 hours lab each semester.
Prerequisite: Biol. 1 & 2.
Fall and Spring 1959-1960

Biol. 23. *Genetics* *4 credits*

The purpose of this course is to give the student a fundamental knowledge of the basic principles and modern theories of heredity as developed by experimental, biometrical and cytological methods. Consideration is given to the practical application of the laws governing inheritance in the fields of plant and animal breeding and human heredity. 2 hours lecture and 4 hours lab. Prerequisite: Biol. 1 & 2 or 3 & 4.
Spring each year

Biol. 103. *Histology* *4 credits*

This course is concerned primarily with the microscopic structure and the functioning relations of vertebrate tissues and organ systems with most attention devoted to the mammal. 2 hours lecture and 4 hours lab. Prerequisite: Biology 21 and 22.
Fall 1958

Biol. 104. *Microtechnique* *4 credits*

A course of training in the preparation of animal and plant tissues for microscopic examination. General methods of preparing histological specimens are covered in detail with special techniques included as time and interest permit. 1 hour lecture and 6 hours lab. Corequisite: Biology 103.
Fall 1958

Biol. 105. *Embryology* *4 credits*

A large part of the course is devoted to the early stages of development where, reproduction, gametogenesis, fertilization, cleavage and the processes of morphogenesis are treated from the comparative viewpoint. The development of organs and organ systems is then studied chiefly as it occurs in frog, chick and pig. 2 hours lecture and 4 hours laboratory. Prerequisite: Biol. 21 & 22.
Spring 1959

Biol. 120. *General Physiology* *4 credits*

This course considers mainly the basic physiological processes and principles underlying the functioning of the animal organism. It deals with the physics and chemistry of protoplasm, with enzymes, irritability, excitation, conduction, contractility and integration. Some attention is given to the functioning of the major organ systems in the mammal. 2 hours lecture and 4 hours lab. Prerequisites: Biol. 21 & 22, Chem. 101 & 102, Phys. 1 & 2.
Fall 1958

Biol. 121. *Bacteriology* *4 credits*

Presented from the biological rather than the medical viewpoint, this course deals with the structure, function, growth, reproduction and relationships of bacteria, yeasts and molds. A brief survey of the pathogens is included together with an introduction to the principles of immunology. 2 hours lecture and 4 hours lab. Prerequisites: Biol. 21 & 22, Chem. 101 & 102, Phys. 1 & 2.
Spring 1959

Biol. 124. *Undergraduate Research and Thesis* *Variable credit*

Reserved for advanced students with satisfactory preparation in the biological and physical sciences who are desirous of acquiring methods in biological research. The subject of the problem, time and credits are to be arranged individually. Prerequisites: 20 credits in Biology, Chemistry 101-102, Physics 1-2.
Offered on request

Biol. 125. *Fundamentals of Parasitology* *4 credits*

This course is concerned with the classification, structure, reproductive life cycles and host relationships of the most common parasites of the major animal phyla. Diseases, methods of control and treatment in relation to parasitic conditions of vertebrates will be stressed. 2 hours lecture and 4 hours laboratory. Prerequisites: Biol. 21 & 22, Chem. 101 & 102.
Not offered 1958-1959

DEPARTMENT OF BUSINESS ADMINISTRATION

Dr. Senker, *Chairman*; Mr. Artabane, Mr. Buckley, Mr. Charnagursky, Mr. Donovan, Mr. Houlihan, Mr. Katorkas, Mr. McGrail, Mr. McLean, Mr. O'Malley, Mr. Zandarski

The courses in Business Administration are designed to achieve the following objectives:

1. To develop the cultural, intellectual and moral qualities of the student through an intensive study of cultural subjects and business problems.

2. To teach the student to think clearly and logically, and to develop his application of the analytical approach in solving current business problems.

3. To encourage individuality of thought and expression by the student, and thereby develop future civic and industrial leaders.

4. To impart a training for executive positions in the business world by the study of Accounting, Law and theoretical as well as applied Economics; to serve as a preliminary training for those wishing to enter the field of Law itself; and to intensively train those wishing to enter the field of public or private accounting.

5. To give preliminary training to those students who wish to pursue graduate courses in business.

Bus. 1. *Elementary Accounting I* *4 credits*

Meaning and purpose of accounting. Development of the accounting equation. Detailed study of the balance sheet and profit and loss statement. The ledger record of business activities. Account and ledger technique, including complete bookkeeping procedures. Adjustments. The journal and its subdivisions. Special journals, their problems and expansion. Ledger subdivision and control accounts. Business papers, the first record of business transactions. Negotiable instruments. The worksheet and summary statements. Completing the ledger record. 4 hours lecture and 5 hours laboratory.
Fall each year

Bus. 2. *Elementary Accounting II* *4 credits*

Partnership formation and operation. Division of profits. Financial statements of a partnership. Methods of admitting a new partner. Partnership dissolution and liquidation. Organization and operation of the corporation. Detailed study of classification and accounting techniques for capital stock,

bonds, mortgages, sinking funds and reserves. Corporate financial statements and their preparation. Changing from a partnership to a corporation. The voucher system. Accounting for the manufacturing concern. Departmental accounting. Inventory valuation and control. Analysis and interpretation of financial statements. 4 hours lecture and 5 hours laboratory. Prerequisite: Bus. 1.
Spring each year

Bus. 5. *Business Law—Contracts* *2 credits*
Introduction to the study of Law. Its nature, administration and the various tribunals. Nature of a contract. Statutory and case law principles of contracts. Formation of a contract by offer and acceptance. Consideration. Capacity of parties. Unenforceable contracts. Statute of Frauds. Performance of contracts—conditions and excuses for non-performance. Rights of third parties. Assignments.
Fall each year

Bus. 6. *Business Law—Negotiable Instruments* *2 credits*
Statutory and case law principles of Negotiable Instruments. Types of negotiable instruments. Issuance and negotiation of promissory notes, drafts and checks. Holders in due course. Rights and liabilities of parties to negotiable instruments. Sales of personal property. Passage of title, risk of loss and seller's warranties. Rights and remedies of unpaid seller. Prerequisite: Bus. 5.
Spring each year

Bus. 21. *Intermediate Accounting I* *2 credits*
A continuation of first year accounting and its application in more complex business situations. Comprehensive study of the fundamental accounting processes. Current assets and non-current assets. Detailed analysis of content and preparation of corporate balance sheets. 2 hours lecture and 3 hours laboratory. Prerequisite: Bus. 2.
Fall each year

Bus. 22. *Intermediate Accounting II* *2 credits*
A continuation of Accounting 21. Comprehensive study of liabilities, capital stock and surplus. Errors and their correction. Statements from incomplete data. Statement analysis, special ratios and their measurement. Statement of application of funds. Partnership formation and operation. Partnership dissolution. 2 hours lecture and 3 hours laboratory. Prerequisite: Bus. 21.
Spring each year

Bus. 25. *Business Law—Agency and Partnership* *2 credits*
Statutory and case law principles of Agency and Partnerships. The creation of the agency relationship. Rights, duties, powers and liabilities of principal,

agent and third parties in relation to each other. Partnership characteristics. Rights, duties, powers and liabilities of partners among themselves and in relation of third parties. Partnership dissolution. Prerequisite: Bus. 5.
Fall each year

Bus. 26. *Business Law—Corporations* *2 credits*
Statutory and case law principles of corporations. Organization of corporations. Corporate powers, by-laws and duties. Rights, duties, powers and liabilities of directors, officers and shareholders. The legal aspect of corporation finance. Statutory and case law principles of real property. Prerequisite: Bus. 25.
Spring each year

Bus. 101. *Advanced Accounting* *4 credits*
Special sales procedures. Installment sales, consignments, agency and branch accounting. Consolidations. A comprehensive study of consolidated balance sheets and profit and loss statements. Fiduciary and budgetary accounting. Statement of affairs. Receivership accounts and statements. Accounting for estates and trusts. Accounting for governmental units. 4 hours lecture and 5 hours laboratory. Prerequisite: Bus. 22.
Fall each year

Bus. 102. *Cost Accounting* *4 credits*
Basic principles of cost accounting and their practical application in the development of cost accounting procedures. The principles of process costs, specific order costs, and standard cost systems. Practical application of process cost and specific order cost systems. Principles of estimated cost systems and the development of budgets as a basis for cost control. Specialized cost treatments. Reports for executive direction. 3 hours lecture and 2 hours credit laboratory. Prerequisite: Bus. 22.
Spring each year

Bus. 103. *Money and Banking* *3 credits*
A general survey of the field of money, credit and prices and an introduction to the study of commercial banking. Evolution of money media, functions of money, monetary standards and the present monetary system of the United States. Commercial banking operations and the use of bank credit in financing business. History of banking in the United States. The operations of a commercial bank. Banking transactions. Recent legislation affecting money, credit and banking in the United States. Prerequisite: Econ. 24.
Fall each year

Bus. 104. *Money and Banking* *3 credits*
A detailed study of commercial bank operations. Bank reserves, deposits and bank notes. Loans and Discounts. Bank Investments. The credit department. Interbank relations including chain, group and branch banking. The

Clearing House and the Par Collection System. The Federal Reserve System. The money markets. Foreign exchange and the methods of financing foreign trade. The Banking System of the United States. Banking problems of today. Prerequisite: Bus. 103.
Spring each year

Bus. 105. *Business Statistics* *3 credits*
Statistical methods, their importance and use in the modern business enterprise. Cautions in their use and interpretation. Initiating and conducting a statistical investigation. Use of mechanical equipment in the determination and preparation of statistical findings. Sampling and the concept of error. Tabular and graphic representation of statistical data. The frequency distribution. Averages. Dispersion and Skewness. Dispersion of statistics computed from samples. 2 hours lecture and 2 hours laboratory.
Fall each year

Bus. 106. *Business Statistics* *3 credits*
Introduction to the theory of probability; application to statistical problems. Index number construction. Current indices used to measure business activity, prices, wages, cost of living, etc. Time series analysis. Related time series. Correlation and forecasting. The application of statistical methods to the analysis of business data and industrial problems. Frequent use of mechanical equipment in an endeavor to facilitate the computation of data needed for time series analysis and index number construction. 2 hours lecture and 2 hours laboratory.
Spring each year

Bus. 107. *Marketing* *4 credits*
The distribution of a product from its very inception to its use by the ultimate consumer. Co-operative marketing, the marketing problems of the individual business, market research and analysis and the choice of marketing channels. All problems are reviewed in the light of the marketing systems of the United States with direct emphasis upon selling through chains, wholesalers, jobbers and direct distribution to retailers and consumers.
Fall each year

Bus. 108. *Industrial Organization and Management* *4 credits*
The principles and problems of the business enterprise from the executive point of view. The economic background of management. Theory of specialization, simplification, standardization, diversification, expansion, contraction and integration. The organization of the industrial plant and principles of management. To acquaint the students with various processes and methods of manufacture, frequent use is made of visual aids and factory trips where possible. No prerequisite.
Spring each year

Bus. 120-121. *Auditing Theory and Applications* *4 credits*
The verification of accounts and their presentation in financial statements. A review of "generally accepted accounting principles" and an introduction to applicable auditing standards. Types of audits, audit programs, the preparation of reports, and the ethics of the profession. Review of internal controls. The preparation and indexing of working papers. Types of reports currently employed. Summarization by a complete audit of a specific case. 3 hours lecture and 2 hours credit laboratory. Prerequisite: Bus. 22.
Fall each year

Bus. 122. *Federal Taxation and Procedure* *3 credits*
The federal system of taxation insofar as it concerns the individual taxpayer. The nature of taxable income. A study of the Internal Revenue Code, regulations and selected materials relating to individual tax accounting. The preparation of Internal Revenue Form 1040. Pay-as-you-go Federal Tax System and required returns. Gross income, items included and excluded. Allowable deductions and credits. Filing of returns. Specialized tax accounting requirements for the individual businessman. 4 hours lecture. Prerequisite: Bus. 101-2.
Spring each year

Bus. 123. *Federal Taxation and Procedure* *3 credits*
A study of the Internal Revenue Code, regulations and selected materials relating to partnerships, estates and trusts, and corporations. The taxing powers and tax systems of states and their municipal subdivisions; state income, municipal income, capital stock, franchise, loans, bonus, escheat, personal property and real property taxes. Federal estate tax and state inheritance and estate taxes. Miscellaneous federal taxes and the Social Security System. 4 hours lecture. Prerequisite: Bus. 122.
Spring each year

Bus. 126-127. *Corporate Financial Management* *4 credits*
The financial structure and problems of the modern business corporation. Common types of securities. Promotion, including the parts played by promoters, investment bankers and security dealers. The security markets. Circulating capital and its relationship to financial management. Determination, management and distribution of income. Financial problems of expansion including changes in the financial plan. Securing funds for expansion. Failure of corporations, reorganizations, readjustments, and receiverships. Bankruptcy and liquidation. Prerequisite: Bus. 104.
Fall each year

Bus. 165. *Statistical Quality Control* *3 credits*
An introduction to statistical methods of quality control. The theory of probability. The use of quality control charts for variables and attributes. A study of distribution and the theory of sampling, with applications to problems

in regression analysis and statistical quality control. Problems of definitions; planning, organizing and installing quality controls in typical manufacturing plants. Prerequisite: Bus. 106.
Spring 1959

Bus. 170. *Marketing Management and Policies* *3 credits*
The aim of this course is to integrate the several approaches to policy making and administration in the field of Marketing. The stress will be on the functions of marketing management in determining and controlling policies. Areas of advertising, retailing, sales and sales management will be integrated in the over-all marketing problem. Prerequisite: Bus. 107.
Fall each year

Bus. 171. *Financial Management* *3 credits*
The purpose of this course is to give the student an integrated knowledge of the policies and practices of the various financial institutions in our economy. It concerns such types as investment banking, mortgage and real estate banking, foreign exchange institutions, the securities and the money markets, insurance companies, mercantile credit institutions, and savings and loan associations. The importance of these institutions in the field of business management is emphasized. Prerequisite: Bus. 104.
Spring each year

Bus. 172. *Administrative Practices* *3 credits*
This course is devoted to a discussion of the principles and techniques of administration. Practical operating problems are presented in the fields of personnel, office, factory, credit, sales and traffic management, with stress on current literature in these fields. Practices and policies of administration of these various segments of a modern business are discussed and integrated into the field of Business Management. Prerequisite: Bus. 108.
Spring each year

Bus. 173. *Applied Statistical Analysis* *3 credits*
The application of the measures of central tendency and the measures of dispersion to business problems. Statistical methods as applied to budgets, forecasting, banking, investment analysis, sales management, market research and personnel administration are covered in the course. Practical problems are solved in each of these fields. Prerequisite: Bus. 106. Stat. Lab.
Fall each year

Bus. 174. *Analysis of Time Series and Correlation* *3 credits*
The methods of fitting trends, straight-line and curves, as well as first, second, and third degree curves to time series. The analysis of changes in patterns. Cyclical movements and the reliability of seasonal indices. Correlation analysis and the methods of determining correlation, including simple, partial, and multiple methods. Measures. Prerequisite: Bus. 106. Stat. Lab.
Spring each year

Bus. 175. *Business Cycles and Forecasting* *3 credits*

A critical inquiry into the nature, causes and control of the business cycle, with special reference to the analysis of business fluctuations, interpretation of current business conditions, and forecasting. Prerequisite: Bus. 106. Stat. Lab.
Spring 1960

DEPARTMENT OF CHEMISTRY

Mr. Burti, *Chairman*; Mr. Appleton, Fr. Casey, S.J., Dr. Waters

The aims of the department are: 1. To train students to think accurately and logically, to develop an analytical type of mind, and to inculcate the scientific method of attacking problems not only in chemistry but in other fields of endeavor. 2. To develop character traits such as patience, pertinacity, honesty and neatness, which are indispensable to the non-scientist as well as the scientist. 3. To train the student for a position carrying some degree of responsibility, either as an advanced student in a graduate or professional school or as a member of the staff of an educational, industrial or research institution.

Chem. 1 & 2. *Inorganic Chemistry and Qualitative Analysis* *8 credits*

A study of the laws, theories and principles of General Chemistry with a survey of the principal elements and their important compounds. A study of the principles of ionization, oxidation-reduction, solubility product and complex-formation methods. Laboratory work exemplifies classroom discussion, and includes semi-micro techniques in the detection and separation of cations and anions.
Fall and Spring each year

Chem. 22. *Quantitative Analysis* *4 credits*

A survey of the general principles of gravimetric, volumetric and electrolytic analyses. Laboratory work stresses technique. 2 hours lecture and 6 hours lab. Prerequisites: Chem. 1, 2.
Fall each year

Chem. 101 & 102. *Organic Chemistry* *8 credits*

An introduction to the chemistry of the principal aliphatic and aromatic compounds of carbon and their derivatives. Laboratory work includes investigation of the chemical properties of the compounds studied, and several of the more important organic preparations. Prerequisites: Chem 1 and 2. 2 hours lecture and 6 hours laboratory each semester.
Fall and Spring each year

Chem. 103. *Advanced Organic Chemistry* *4 credits*

A continuation of Chem. 101-102, including a study of the alicyclics and heterocyclics, the organic dyes and the naturally occurring compounds of carbon. Laboratory work will consist of a number of the more difficult syntheses and will require some investigation of the original literature. 2 hours lecture, 6 hours laboratory. Prerequisites: Chem. 101 and 102.
Fall each year

Chem. 106. *Advanced Inorganic Chemistry* *2 credits*

A detailed study of the chemical properties of elements with regard to the electronic structures and sizes. The Periodic System is the basis for such study. Two hours lecture. Prerequisites: Chem. 1 and 2 and Chem. 123 and 124.
Not offered 1958-1959

Chem. 121. *Biochemistry* *3 credits*

A study of the chemical nature and more important reactions of the biologically active compounds such as carbohydrates, lipids, amino acids, proteins, minerals, vitamins and hormones. 2 hours lecture and 3 hours lab. Prerequisites: Chem. 22, 101, 102.
Not offered 1958-1959

Chem. 122. *Physiological Chemistry* *3 credits*

A study of the metabolism, digestion and absorption of carbohydrates, lipids, amino acids and proteins together with the role of enzyme and enzyme systems in the above processes. A survey of the physiological action of hormones and a discussion of recent advances in the field of Physiological Chemistry are included in the course. 2 hours lecture and 3 hours lab. Prerequisites: Chem. 22, 101, 102.
Not offered 1958-1959

Chem. 123 & 124. *Physical Chemistry* *8 credits*

A study of the physico-chemical properties of matter and the dynamics of chemical reactions. Laboratory experiments illustrate the principles studied. 3 hours lecture and 3 hours lab each semester. Prerequisites: Chem 2, 22; Math. 21, 22.
Fall and Spring each year

Chem. 125. *Advanced Quantitative Analysis* *3 credits*

A survey of advanced methods of analysis using specialized apparatus. The analysis of alloys, ores and mixed salts is emphasized. 1 hour lecture and 6 hours lab. Prerequisite: Chem. 22.
Spring each year

Chem. 126. *Organic Analysis* *3 credits*
A study of systematic classification and identification of organic compounds from their solubilities and group reactions, including the separation and identification of the components of organic mixtures. 1 hour lecture and 6 hours lab. Prerequisites: Chem. 101 and 102.
Spring each year

Chem. 127. *Chemical Literature* *1 credit*
A study of the published source material of chemical science and chemical industry. The course includes practical instruction in library technique. One hour lecture.
Fall each year

Chem. 129 & 130. *Thermodynamics for Chemists* *4 credits*
A study of the laws of thermodynamics. A detailed consideration of the application of the laws and relationships evolved from the laws and states of matter, phase changes, solutions of non-electrolytes and electrolytes, and chemical reactions. Two lectures each semester. Prerequisites: Chem. 123 and 124.
Fall and Spring each year

Chem. 132. *Undergraduate Research* *2 credits*
Individual study and research in connection with a specific chemical problem. The course taken with the permission of the Chemistry Department Staff Prerequisites: Chem. 103, 124 and 127.
Spring each year

DEPARTMENT OF CLASSICAL LANGUAGES

Mr. Mann, *Chairman*

The objectives of the Classical department are: first, to develop in the student the ability to read easily and to compose readily in Latin and Greek; secondly, through the discipline afforded by the tongues of Greece and Rome to train the student in habits of accurate observation, orderly procedure, analysis, logical and inferential thinking; thirdly, to develop the student's powers of appreciation and expression by a thorough study of the artistry of classical literature; and finally to give him a comprehensive understanding of the human values of Graeco-Roman culture in both its pagan and patristic phases and of its profound contributions to modern civilization.

The course of studies terminating in a Bachelor of Arts degree is characterized by a two year study of Latin literature, normally satisfied by Latin 21-22 and 31-32. For students with only two years of secondary school Latin, Latin 3-4 and 21-22 will be accepted as a substitute. Students starting with Latin 1-2 will be required to complete Latin 3-4 and Latin 21-22 to satisfy the requirements for the degree.

1. Greek

Greek 1 & 2. *Elementary Greek* *8 credits*
An intensive course in the fundamentals of Classical Greek grammar.
Fall and Spring eachyear

Greek 3 & 4. *Intermediate Greek* *6 credits*
Review of fundamentals. Composition. Reading of selections from Xenophon, Plato, Aristotle, Plutarch and the New Testament.
Fall and Spring each year

Greek 21. *Socrates and Plato* *3 credits*
Readings in the Apology, Crito and Phaedo, supplemented by extra work in the Republic. An analysis of Socrates and his pupil Plato, showing their position in the history of Western thought.
Fall 1959

Greek 22. *The Drama and Euripides* *3 credits*
A history of Greek drama from its origins to Euripides. A consideration of the canons of Greek drama as presented by Aristotle in the Art of Poetry. An evaluation of Euripides as poet, dramatist and thinker through a reading of his major works.
Spring 1960

Greek 31. *Sophocles* *3 credits*
A detailed study of Oedipus Tyrannus as a masterpiece of dramatic art with an analysis of the structure, spirit and character-delineation of Greek tragedy as developed by Sophocles. Additional reading of Electra and Antigone.
Fall 1958

Greek 32. *Demosthenes* *3 credits*
Reading of the Philippic and Olynthiac orations, providing a background for the major study of the Crown Oration as a model of rhetoric, together with a discussion of Classical oratory as found in Aristotle's Rhetoric.
Spring 1959

Greek 101. *Homer's Iliad* *3 credits*
A survey course in the master-epic of Homer with emphasis on oral reading of the original in class.
Not offered 1958-1959

Greek 102. *Homer's Odyssey* *3 credits*
A survey course covering the entire scope of the Odyssey with special stress being laid on the rhythm and music of Homer's verse.
Not offered 1958-1959

Greek 103. *Greek Philosophy* *3 credits*
Greek philosophical thought from Thales down to the Neoplatonism of Plotinus. Special consideration is given to Plato and Aristotle and their contributions to the moulding of Western thought.
Not offered 1958-1959

Greek 104. *Christian Greek Literature* *3 credits*
Early Christian thought as found in the writings of Ignatius of Antioch, Polycarp, Cyril of Jerusalem, along with selections from the Epistles of St. Paul and the New Testament.
Not offered 1958-1959

Greek 109 (110). *Reading in Greek Literature* *3-6 credits*
Selections from Greek writers to suit the student's special interest. Paper required. Course given by special arrangement.

II. LATIN

Latin 1 & 2. *Elementary Latin* *8 credits*
An intensive course in the fundamentals of Classical Latin grammar.
Fall each year

Latin 3 & 4. *Intermediate Latin* *8 credits*
Readings in Latin together with daily composition work designed to give the student facility in handling the basic idioms and constructions of the language. Reading of selections from Cicero and Virgil.
Fall each year

Latin 21. *Livy and Virgil* *4 credits*
Selections from Livy I and XXI, and from Books VII-XII of Virgil's Aeneid, Exercises in composition.
Fall 1958

Latin 22. *Horace and Catullus* *4 credits*
Lyric poetry illustrated by the Odes of Horace and selected poems of Catullus. Exercises in composition.
Spring 1959

Latin 103. *Roman Philosophy* *3 credits*
Readings from Cicero's Tusculan Disputations and Lucretius' De Rerum Natura to illustrate contrasting developments in Roman thinking. The course includes a brief survey of ancient philosophy.
Fall 1958

Latin 104. *Christian Latin Literature* *3 credits*
Selections from the Latin Fathers with concentration on the Confessions of St. Augustine. Lectures on the development of Christian Latin Literature.
Spring 1959

Latin 109 (110). *Readings in Latin Literature* *3-6 credits*
Selections from Latin writers to suit the student's special interest. Paper required. Course given by special arrangement.

DEPARTMENT OF EDUCATION AND PSYCHOLOGY

Dr. Lennon, *Chairman*; Mr. Benson, Dr. Bourne, Mr. Budash, Dr. Fitzgerald, Mr. Langan, Mr. Lilly

The aims of the Department of Education and Psychology are: (1) to develop in the individual those professional qualities required for successful teaching; (2) to offer professional training for certification as an elementary or secondary school teacher; (3) to meet requests for specific courses by teachers in service; (4) to present a co-ordinated undergraduate program in psychology for the student interested in graduate work in psychology or related fields; (5) to aid in the professional development of teachers by presenting a well integrated program of graduate studies leading to the Master of Arts degree.

The Department of Education and Psychology passes upon the eligibility of each student who applies for teacher education.

Students in the Education Curriculum working for a college provisional certificate for secondary school teaching in Pennsylvania are required by the University to pass successfully Education 101, 103, 105, 107 and 111 in addition to eighteen semester hours in each of two subject matter fields. The students working for elementary school certification will arrange their programs in consultation with members of the Department. Practice teaching will be arranged for students who meet course requirements and have the other necessary qualifications:

(1) A general academic record of at least C.
(2) A quality point average of 1.5 in the student's teaching fields.
(3) Approval of applicants by respective department heads.
(4) Evidence of good personality.
(5) Competence in both written and oral English. Tests may be administered.

Educ. 21. *Introduction to Education* *3 credits*
An orientation course for all students who plan to enter the teaching profession. Emphasis is placed upon the evolution of the public school system, democratic principles, objectives, curriculum, the learner, the function of the teacher and professional requirements.
Fall each year

Educ. 22. *Educational Psychology* *3 credits*

An introductory course in educational psychology stressing growth and development, individual differences, intelligence, motivation, learning principles, transfer of training and educational measurement.
Spring each year

Educ. 101. *Tests and Measurements* *3 credits*

A practical course giving the history of the testing movement, general principles and criteria of measurement and evaluation. Practice is afforded in the construction of different forms of test questions. A limited presentation of fundamental statistics is taught for the correct handling of test data.
Fall each year

Educ. 102. *History of Education* *3 credits*

A survey of educational development from primitive times to the present. The aim of the course is to trace the development of present tendencies from primitive society, Greek and Roman education, the Renaissance and the changes induced by realism, philanthropic education, the psychological and scientific movements. Contributions to modern educational practice are noted.
Spring 1959

Educ. 103. *Principles and Techniques of High School Teaching* *3 credits*

A secondary school methods course emphasizing principles and methods of teaching such as socialized recitation, project and problem methods, visual instruction, differentiated instruction and assignment. This course to be taken concomitantly with Education 101. Prerequisites: Education 21 and 22.
Fall 1958

Educ. 104. *Special Methods of Teaching in High School* *3 credits*

The selection and organization of content of high school courses and the classes are taught in laboratory practice. Special methods of instruction for the various subject matter fields. This course must be taken concomitantly with Education 103. Prerequisites: Educ. 21 and 22.

A. Methods of Teaching of Social Studies.

B. Methods of Teaching English.

C. Methods of Teaching Modern Languages.

D. Methods of Teaching Science.

E. Methods of Teaching Mathematics.

Fall each year

Educ. 105. *Observation and Practice Teaching* *6 credits*

Observation and study of classroom teaching are combined with actual student teaching under expert supervision. Group conferences and personal interviews are held frequently with the supervisor of practice teaching. The student teacher is expected to take part in all school activities. Prerequisites: Education 21, 22, 103 and 104.

Spring each year

ELEMENTARY EDUCATION

Educ. 120. *Principles of Elementary Education* *3 credits*

Basic principles of elementary education and the philosophical bases which underlie them are studied from an historical viewpoint. Professional and community factors that have affected the elementary school and the trends in development of the modern school are treated in some detail. Organization of curriculum units, testing, methodology and pupil guidance are considered to some degree.

Fall each year

Educ. 121. *Child Psychology* *3 credits*

The growth and development of the child including the physical, social, emotional, intellectual, moral and religious, and language changes from age to age are treated in detail. Especial attention is paid to their importance for the elementary teacher.

Fall each year

Educ. 122. *Elementary School Curriculum* *3 credits*

This course treats of the development of the elementary school curriculum, its relation to society and the individual child. Extensive treatment is afforded to content and methods in art, music, science, language, etc., with reference to the State Bulletin.

Fall each year

Educ. 123. *Teaching of Art* *3 credits*

This course will give the student an understanding of the children's changing needs of artistic expression. It has to do with methods and techniques for different age levels and classroom situations. Sources of art materials and their selection are treated. Work units integrating art with subject matter are included in this course.

Fall each year

Educ. 124. *Teaching of Reading* *3 credits*

A study of modern reading materials and techniques in the elementary grades. Word-recognition skills, development of vocabulary, wide understanding, recreational reading as well as reading disabilities and their correction are considered in this course.

Spring each year

Educ. 125. *Teaching of Arithmetic* *3 credits*
Principles, materials and methods of instruction in elementary arithmetic; attention is given to techniques for developing units of work and techniques for presentation of quantitative data at the elementary level.
Spring each year

Educ. 126. *Teaching of Music* *3 credits*
A study of appropriate materials and methods for the development of appreciation in each grade by listening and performance.
Spring 1959

Educ. 127. *Teaching of Health and Physical Education* *3 credits*
A survey of the principles of teaching health and physical education in the grades. First aid, healthful habits and attitudes, safety precautions involving the child are considered. Attention is also paid to games and physical education activities in the different grades.
Fall each year

Educ. 128. *Practice Teaching and Observation in the Elementary Schools* *8 credits*
Observation and classroom teaching under the guidance of expert co-operating teachers. Student teachers hold frequent personal interviews and group conferences with the supervisor of practice teaching.
Spring each year

PSYCHOLOGY

Psych. 120. *History of Psychology* *3 credits*
A survey of some of the more important theoretical systems, experiments and personalities in the development of modern psychology as a science. Prerequisites: Psych. 121, 124.
Spring 1960

Psych. 121. *General Experimental Psychology* *3 credits*
An introductory course designed to acquaint the student with basic concepts of experimental psychology, emphasizing facts, principles and methods.
Fall each year

Psych. 122. *Experimental Psychology; Laboratory* *3 credits*
Lectures cover topics of sensation, perception, memory, reasoning. The student will perform experiments dealing with these topics in the laboratory. Lecture 2 hours; laboratory 2 hours. Prerequisite: Psych. 121.
Spring each year

Psych. 123. *Mental Hygiene* *3 credits*

Application of psychological principles to the problem of maintaining adjustment and developing a well-integrated personality. Consideration is paid to factors influencing behaviour, dynamics and motivation of behaviour; varieties of adjustment.

Fall each year

Psych. 125. *Abnormal Psychology* *3 credits*

A study of predisposing and precipitating factors in the development of neuroses and psychoses; an attempt is made to synthesize existing classifications of mental disorders and to examine biological, social and cultural influences before discussing methods of therapy.

Spring each year

Psych. 126. *Social Psychology* *3 credits*

A study of social aspects of personality; the development and manifestations of social awareness; suggestion, imitation, group behavior and the individual mechanisms of social adjustment.

Fall each year

Psych. 127. *Industrial Psychology* *3 credits*

General Survey of applied psychology. The principles and techniques in selection and management; job analysis; occupational descriptions; employment procedures; interviews, tests, inventories, counseling; industrial training, promotions, transfers, prevention of accidents; management employee relations.

Course offered by special arrangement

Psych. 128. *Introduction to Clinical Psychology* *3 credits*

A survey of the principal diagnostic and treatment procedures and resources used in various clinical settings; consideration of the professional duties, skills and ethics of the clinical psychologist. Prerequisites: Psych. 121, 125, 126.

Spring 1959

Psych. 129. *Elementary Statistics* *3 credits*

Frequency distributions; measures of central tendency and variability; normal probability curve; elementary sampling; correlation are topics treated in this course.

Spring each year

DEPARTMENT OF ENGINEERING

Mr. Plonsky, *Chairman*; Mr. Rist

The objective of the Engineering Department is to introduce the student into the highly technical training necessary for all phases of the Engineering Profession.

Engin. 13. *Mechanical Drawing* — *3 credits*

The use of drawing instruments is applied to the drawing of orthographic views of objects, isometric and oblique drawings, sectional views, conventional and semi-conventional representation of screw threads, auxiliary views, tracings on tracing paper and tracing cloth. Freehand sketching of objects in orthographic projection and isometric view is also presented. Use of proper conventional mechanical lines as well as the art of good lettering is stressed in all plates. 6 hours drafting room practice and 1 hour lecture.
Fall each year

Engin. 21. *Engineering Mechanics—Statics* — *4 credits*

This course is devoted to the study and analysis of various types of force systems; resultants and conditions of equilibrium; stress analysis of the parts of different types of structures by graphical and analytical methods; frictional forces; centroids and moments of inertia of areas and solids. Prerequisite: Physics 18; Corequisite: Math. 21.
Fall each year

Engin. 22. *Engineering Mechanics—Dynamics* — *4 credits*

Kinematics of particles and rigid bodies which includes linear, curvilinear, angular and relative motions; inertia forces, impulse momentum, work, energy and power considerations of mechanics; mechanical vibrations. This course is designed for both engineering and physics students. Prerequisite: Engin. 21; Corequisite: Math. 22.
Spring each year

Engin. 23. *Plane Surveying* — *3 credits*

The student will be given the opportunity to familiarize himself with the Dumpy and Wye levels, several makes of transits, their use, care and adjustment. The field work will include of the following: Running of closed and open traverses, determination of the azimuth of a course by solar observation, stadia shots for "topo" and location data, bench mark and profile leveling, staking out of simple curves. In addition to the theory implied with the foregoing, the following points will be considered: calculation of areas by co-ordinates, DMD, and planimeter; calculation of a vertical curve; plotting of a map from a deed; earthwork calculations. 1½ hours Lec. and Rec. 4½ hours field work. Prerequisite: Math. 13.
Fall each year

Engin. 24. *Descriptive Geometry* *3 credits*
The geometric method of projection of points, lines and planes and the application of these methods to graphical solution of engineering problems involving lines, planes and solids; truncations and intersections of solids leading to the development of surfaces and traces of perspective views. The rules of drafting room practices are continued regarding lettering and conventional lines. One hour lecture, six hours drafting room practice. Prerequisite: Engin. 13.
Spring each year

Engin. 25. *Engineering Materials* *3 credits*
This course is designed to acquaint the student with the materials that are used in engineering construction and fabrication; their source, manufacture, properties, methods of testing, uses and limitations. The subject includes not only metals but also cementing materials, wood, rubber, glass, plastics, corrosion and protective coverings. Prerequisite: Chem. 2.
Fall each year

Engin. 31. *Engineering Electricity* *4 credits*
A treatment of fundamental principles of direct current and magnetic circuits and the application of these principles to the theory and performance of direct-current machinery which includes not only motors and generators but also the associated control apparatus and measuring equipment. Classroom instruction is supplemented by experimental work in the electrical machinery laboratory. Corequisite: Physics 20.
Not offered 1958-1959

Engin. 32. *Engineering Electricity* *4 credits*
A treatment of fundamental principles of alternating current circuits, including three phase circuits, and the application of these principles to the theory and performance of alternating current machinery such as generators, motors, transformers, rectifiers, measuring instruments. An introduction to electronic tubes and circuits is also presented with basic applications in rectifiers, amplifiers, oscillators. Classroom instruction is supplemented by experimental work in the electrical engineering laboratory. Prerequisite: Physics 20.
Not offered 1958-1959

Engin. 101. *Elements of Electrical Engineering* *4 credits*
The application of the principles of electric and magnetic circuits to the theory and performance of electrical machinery such as direct-current generators and motors, alternating-current single-phase and three-phase generators and motors, control circuits, transformers, electrical measuring instruments. Classroom instruction is supplemented by experimental work in the electrical machinery laboratory wherein the student is familiarized with the techniques of operating and of obtaining characteristics of electrical machinery. This course is designed for Electronic Majors. Prerequisite: Physics 104.
Fall and Spring each year

DEPARTMENT OF ENGLISH

Fr. Grady, S.J., *Chairman*; Dr. Clarke, Mr. Cullather, Mr. Driscoll, Mr. Holden, Mrs. Lesniak, Dr. Lodge, Mr. McGurl, Mr. Murray, Mr. O'Gorman, Mr. O'Rourke, Fr. Quinn

The aim of the Department of English is to furnish the student with a balanced course in English which will realize the objectives of a liberal arts college. The course is planned to train the student to read, write and speak English as effectively as possible and encourage him to appreciate more deeply the artistic creations of the English language. All candidates for the degree will be required to take courses 1-2, 3-4, and 23-24. The remaining courses are offered as electives for those who have satisfied the requirements of the basic courses.

English Review

The object of this course is a thorough mastery of the fundamentals of English. Spelling, punctuation, grammar, diction, sentence and paragraph structure. Required of all students who fail to meet the required score in the English entrance examination.
Three periods weekly—No credit—Fee $54.00.

Developmental Reading

Required of students who show deficiency in reading.
One hour weekly—No credit—Fee $15.00.

Engl. 1 & 2. *College Composition and Introduction to Literature* — *6 credits*

This course is designed to increase the college student's mastery of the techniques of communication in English. The principles of literary structure: unity, coherence, emphasis. The qualities of style: clarity, force, interest. Development and arrangement of ideas in the informal essay. Narration and description. The nature, elements and types of Poetry: principles of versification. Appreciation of lyric poetry.
(N.B.: A program of required reading is integrated with and supplements lectures and discussions, with required exercises.)
Fall and Spring each year

Engl. 3 & 4. *Public Speaking* — *2 credits*

The principles of oral expression; enunciation, pronunciation, emphasis, interpretation; together with the elements of argumentation, the preparation and presentation of formal and informal speeches.
Fall and Spring each year

Engl. 23 & 24. *Oratory and Dramatic Literature* *6 credits*

A study of the more formal types of literary composition, this course emphasizes the structure and development of the prepared oration—the invention, disposition and expression of arguments, and oratorical style—during the first semester. The second semester is devoted principally to a study of the structure of the drama. Lectures, discussions and required exercises, together with required program of supplementary reading.
Fall and Spring each year

Engl. 101. *British Literature of the XVIIth Century* *3 credits*

A critical and appreciative study of the literary work of the writers of the Jacobean and Restoration period, including Donne, Crashaw, Herrick, Sir Thomas Browne, Jeremy Taylor, Bunyan and Milton.
Fall 1958

Engl. 102. *British Literature of the XVIIIth Century* *3 credits*

A critical and appreciative study of the writers of the Neo-classical period, including Samuel Johnson, Goldsmith, Burke, Walpole, Boswell, Pope, Swift, Sheridan, Addison and Steele, Gray, Thomson, Cowper and Blake.
Spring 1959

Engl. 103. *British Literature of the XIXth Century, (a) The Romantic Period* *3 credits*

A critical and appreciative study of the writers of the "Age of Romanticism" in British Letters: Wordsworth, Coleridge, Shelley, Keats, Byron, Scott, DeQuincey, Charles and Mary Lamb, Landor, Leigh Hunt.
Fall 1959

Engl. 104. *British Literature of the XIXth Century, (b) The Victorian Era* *3 credits*

A critical and appreciative study of the writers of the Victorian period, including Tennyson, the Brownings, the Brontes, Carlyle, Newman, Macaulay, Thackeray, Dickens, Matthew Arnold, Ruskin, Swinburne.
Spring 1960

Engl. 105. *American Literature to 1900* *3 credits*

A survey of the development of the body of distinctively American Letters through the XVIIIth and XIXth centuries, with special emphasis on Hawthorne, Irving, Cooper, Melville, Whitman and the Concord Poets.
Fall 1958

Engl. 106. *American Literature after 1900* *3 credits*
A survey of the maturer and more nationally conscious American Literature which emerged after the World War I, particularly in the works of Wolfe, Hemingway, Cather, O'Neil, Frost, Robinson, Faulkner, Sinclair Lewis, et al.
Spring 1959

Engl. 107. *The Novel in English*: (*a*) *Chaucer to Scott* *3 credits*
A study of the development of the novel form in the English language, British and American, from Chaucer to Scott.
Fall 1959

Engl. 108. *The Novel in English*: (*b*) *Dickens to the Present* *3 credits*
A study of the major novelists, British and American, from Dickens to the present, with attention to the evolution of the novel as a social commentary.
Spring 1960

Engl. 109. *The Forms of Drama*: (*a*) *Aeschylus to Ben Johnson* *3 credits*
A study of the development of dramatic forms from the Greek classic through the miracle and morality play to the fluid plays of the Elizabethan era.
Fall 1959

Engl. 110. *The Forms of Drama*: (*b*) *Sheridan to Shaw* *3 credits*
A study of the dramatic forms that developed after the Elizabethan period, emphasizing the development of the "problem play" after Ibsen, and the growing attempts to "break through the proscenium" and widen stage horizons.
Spring 1960

Engl. 111. *Shakespeare*: *Tragedies* *3 credits*
A critical and apppreciative study of five major tragedies and of five of the principal chronicle plays.
Fall each year

Engl. 112. *Shakespeare*: *Comedies* *3 credits*
Critical and appreciative study of the major comedies and of the comic sequences in the chronicle plays.
Spring each year

Engl. 113. *Medieval English Literature, 1000-1400* *3 credits*
A study of the historical, social and literary background with emphasis on the works of Chaucer. (For selected advanced students majoring in English).
Fall 1959

Engl. 114. *Principles of Literary Criticism* *3 credits*
A study of the theory of literary criticism and the principles of literary aesthetics, from Aristotle and Longinus to the present.
Spring 1960

Engl. 115. *Journalism* *3 credits*
A survey of the history and development of modern journalism; journalistic terminology; newspaper writing; publicity, advertising copy, news-reporting, feature and editorial writing. Newspaper and magazine editorial organization. Headline writing.
Fall 1958—Evening Sessions

Engl. 116. *Journalism* *3 credits*
The preparation of news-copy; editing copy for publication; preparation of feature and special articles; editorials and editorial policies; newspaper and magazine layout. Prerequisite: English 115.
Spring 1959—Evening Sessions

Engl. 117. *Creative Writing Seminar* *3 credits*
Group conferences and discussions of the techniques of writing for publication: fiction, poetry, playwriting, biography. Critical discussion of work of seminar members. For selected advanced students only, who have shown superior ability in creative expression.
Offered on request

Engl. 120. *Critical Approaches to the Communication Arts* *3 credits*
A discussion of the philosophical basis for critical appreciation of modern literature and the media in which it is presented: publishing, motion pictures, radio and television; and an evalution of the criticism of these media as presented in professional literary magazines and reviews. Use is made of recordings of plays, music; and of attendance at selected theatrical presentations and concerts, radio performances.
Spring 1959

Engl. 121. *Contemporary Poetry* *3 credits*
A survey and study of major contemporary poets, including T. S. Eliot, Auden, Spender, Macleish, Aiken.
Fall 1958

Engl. 122. *English Seminar* *Variable credit*
For students majoring in English Literature. Discussion of assigned topics and of areas of reading.
Offered on request

DEPARTMENT OF HISTORY AND POLITICS

Mr. Brown, *Chairman*; Fr. Gallagher, S.J., Dr. Gannon, Mr. Scully

The Department Aims: (1) To contribute to the culture and development of the students; (2) to encourage the student to approach the subject along the lines of solid historical methodology in his investigation, determination and reconstruction of data; (3) to present history as the study of human activities and concrete events which have social significance; (4) to demonstrate that the content constitutes a body of knowledge the parts of which are interdependent because of causal relations; (5) to bring to the student an intelligent and critically sympathetic understanding of his own and other people's civilization and culture. The Department does not aim to make specialists; rather it aims to give a comprehensive understanding of basic historical trends.

Prerequisites: For the History major History 1-2, 3-4, plus eighteen credit hours from upper division courses for a total of thirty credit hours. The Department strongly recommends History 126-127, 118-119, 110-111, and 132 or 120 as the courses best designed to give the student that comprehensiveness of understanding which constitutes one of the major aims of the Department.

Hist. 1 & 2. *Political and Social History of the United States* — *6 credits*

A fundamental study of the history of the United States from the time of its European beginnings to the present, with special emphasis on the history of Pennsylvania. The first semester will analyze the period from our colonial origins to the end of the Civil War. The second semester will deal with the period of Reconstruction to our own times. Required of all students for any degree from the University. This course also meets the requirements of the State for public school teaching. (Students who have not taken History 1 will not be allowed to take History 2.)
Fall and Spring

Hist. 3 & 4. *History of Modern Europe, 1500 to the Present* — *6 credits*

A fundamental study of European history with main concentration upon the political aspects of European development. First semester: from the period of the rise of national monarchies to the Congress of Vienna. Second semester: from 1815 to the present. Continued emphasis will be placed on political developments but the significance of industrialism, the new nationalism and liberalism will be noted.
Fall and Spring

Hist. 110 & 111. *Medieval History* *6 credits*

A survey of medieval political and religious institutions. First semester: the origins and diffusion of Christianity; the contribution of imperial Rome; the emergence of political authority after the invasion and settlement of the barbarians; the spread of learning under monastic influence; the role of the Papacy; the achievements of the Crusades. Second semester: Decline of the Eastern Empire; the Holy Roman Empire; the Church in the period of Innocent III, the Renaissance of the twelfth and thirteenth centuries; the decline of medieval Europe before the secularization of thought in the field of politics, economics and religion.

Hist. 112. *Renaissance and Reformation* *3 credits*

An intensive study of Europe from the fourteenth to the middle of the seventeenth century. First quarter: study of humanism, the new wealth and the bourgeoisie; breakdown of medieval unity. Second quarter: the causes of the Protestant Revolution; Luther, Henry VIII, Calvin. The Catholic Reformation, religious wars, Peace of Westphalia.

Hist. 114. *French Revolution and Napoleonic Era* *3 credits*

First quarter: historical antecedents of the Revolution; the Philosophies; republicanism and the fall of the monarchy; Reign of Terror; France and Europe; the Directory. Second quarter: rise of Napoleon; the Consulate; internal achievements; intervention in Europe; significance of the Spanish and Russian campaigns; War of Liberation; Waterloo. Critical assessment of the period in the light of modern trends.

Hist. 116-117. *Europe in the Nineteenth Century* *6 credits*

The Congress of Vienna and the European restoration; the rise of national sentiment and its expression in revolutions; the Industrial Revolution and its social, political and colonial consequences. The unification of Italy and Germany; Russia; Mediterranean politics and the Eastern Question; international alliances and rivalries.

Hist. 118 & 119. *Development of Contemporary Civilization in Western Europe* *6 credits*

An analysis of the major economic, social and cultural aspects of European life since 1500. First semester: impact of the Protestant Revolution on European society; decline of medieval religious and economic unity; commercialism and the bourgeoisie; the intellectual revolution; antecedents of the French Revolution. Second semester: liberalism and reactions; fruits of the industrial revolution; march of the new sciences; socialism and communism; nationalism and imperialism; the twentieth century inheritance.

Hist. 120 & 121. *American Diplomatic History* *6 credits*

First semester: survey of the origins and development and functions of the State Department and its relation to other policy-forming agencies of the federal government. Diplomatic activities prior to 1789; the Louisiana Purchase; War of 1812; the Monroe Doctrine; Manifest Destiny. Second semester: Pan-Americanism, Cuba and the Caribbean, World War I; problems in the inter-bellum period; today's challenges and attempted solutions. United Nations Organization.
Fall and Spring 1958-1959

Hist. 122 & 123. *American Constitutional and Legal History* *6 credits*

First semester: the historical background of the federal constitution; legal disputes and theories of colonial and revolutionary periods; the nature of the Constitution and its interpretation by Marshall and Taney. Second semester: constitutional problems occasioned by the Civil War; the new amendments; the explanation of federal powers. State constitutions, powers and activities in relation to the federal constitution. Key cases will be analyzed in detail and set in their proper historical perspective.
Fall and Spring 1959-1960

Hist. 124 & 125. *History of American Political and Social Thought* *6 credits*

An inquiry into the major philosophies which helped shape our institutions. First semester: Puritan concepts of liberty, property, and representation; views of the Independents; pre-Revolutionary society and thought and the growing adherence to the notion of independence; the Constitution as it represents a compromise between the conservative and liberal traditions; Jeffersonian and Jacksonian democracy; social, economic, and political ramifications of the slavery question. Second semester: triumph of the nationalist view and its implications; recent tendencies; the problem of liberty in the complex, highly technical American society.
Not offered 1958-1959

Hist. 126-127. *Development of American Civilization* *6 credits*

An analysis of leading economic, social and cultural aspects of American life. First semester: study of the economic, religious and intellectual bases of colonial American life; impact of the Revolution; development of town and country life; sectional differences; the first factories and labor movements; growth of democracy and the reform movements. Second semester: study of the leading economic, social and cultural factors which shaped modern life and institutions since 1865. Among the topics treated are the growth of industry, agriculture and the agrarian discontent; the disappearance of the

frontier; labor and immigration; sport, literature and the arts; religious tendencies; diffusion of knowledge.
Fall and Spring 1959-1960

Hist. 128-129. *Special Topics in American History* *6 credits*
An analysis of selected topics in American political internal history from the Colonial Period to the end of the Nineteenth Century. Extensive readings are required. Restricted to History Majors.
Course offered by special arrangement

Hist. 130-131. *The United States in the Twentieth Century* *6 credits*
An intensive study of American development from 1900 to the present. Stress will be placed on the Roosevelt Era and its Progressivism, Wilson's New Freedom, diplomacy of the first World War, the return to "normalcy," the Great Depression and the New Deal, Roosevelt and world politics, and origins and consequences of World War II.
Fall and Spring 1958-1959

Hist. 132. *Co-ordinating Seminar in American History* *3 credits*
Intensive readings and reports on selected problems in American history. In all discussions an attempt will be made to integrate information in such terms as will give a unified picture of American life and institutions. Open only to Seniors working in History or by special permission from the Chairman of the Department. Normally History 1 & 2 and twelve additional credits from courses in American History and Politics will be prerequisites.

POLITICAL SCIENCE

For the Political Science major the Department aims to accomplish the following objectives: (1) to give the student a thorough understanding of the nature and purposes of civil society; (2) to impart a sound knowledge of the philosophical basis of democracy; (3) to enable him to appreciate the problems of his own government at work and (4) to relate the American system to the governments of other states in the international community.

The aim is not to make specialists but to assist in the acquisition of a sound core of fundamental knowledge upon which can be built the basis of both good citizenship and good scholarship.

Pol. Sci. 101 & 102. *American National Government* *6 credits*
The course will begin with a philosophical analysis of such basic terms as society, state, authority and common good. Forms of government will be contrasted and evaluated. The structure, operations and functions of the three branches of the national government will then be studied.
Fall and Spring each year

Pol. Sci. 105. *State Government* *3 credits*
A general survey of the natural constitutional position of the states and the changing federal-state relationships will precede the detailed analysis of state governments in actual operation. Emphasis will be placed on Pennsylvania and actual problems of procedure and policy will be used to illustrate general trends in state governments.
Fall 1959

Pol. Sci. 106. *Local Government* *3 credits*
Types of local government, evolution of the American township, county, borough and city from English prototypes; participation in local government and politics as a training school for democracy; constitutional and statutory limitations on local governments; efforts to preserve "home rule"; functions of local officials; budget, personnel, local taxation and assessment, purchasing, indebtedness, suggestions for improvement in structure and operation of local governments, especially those of Pennsylvania.
Spring 1960

Pol. Sci. 107. *Public Administration* *3 credits*
Nature of public administration; structures and limitations imposed through legislative statutes and apppropriations; staff organization and flow of command; employment policies, personnel training and management; employee organization; public relations.
Fall 1958

Pol. Sci. 120-121. *American Relations* *6 credits*
This course is identical with History 120-121.
Fall and Spring 1958-1959

Pol. Sci. 122-123. *American Constitutional and Legal History* *6 credits*
This course is identical with History 122-123.
Fall and Spring 1959-1960

Pol. Sci. 124-125. *American Political and Social Thought* *6 credits*
This course is identical with History 124-125.
Fall and Spring 1958-1959

Pol. Sci. 126. *The Political Parties of the United States* *3 credits*
An analysis of the origins, nature and functions of parties under our American system of government; the English tradition of the party system; differences between the English and American concepts. Jeffersonianism versus Hamiltonianism; sectionalism and pressure groups; splits in party organization prior to

the Civil War; impact of the new industrial order on political alignments; the role of third parties in the United States; current stresses and strains on both major party organizations.
Spring 1959

DEPARTMENT OF MATHEMATICS

Mr. Bartley, *Chairman*; Fr. Powers, S.J., Mr. Savulis

The Department of Mathematics instructs students who are pursuing different courses of study and recognizes that the instruction must be adapted as much as possible to the needs of these students. For the Arts and Social Science students the objectives of the Department are: (a) to train the students in the basic and necessary skills of mathematics which will be required in nontechnical pursuits; (b) to bring out the cultural and applied values of mathematics; and (c) to show the dependence of other branches of knowledge on mathematics. In addition in the instruction of engineering and science students for whom mathematics is a tool subject the objectives of the Department are: (a) to develop skill and accuracy in mathematical operations; and (b) to familiarize the students with the methods of mathematical analysis. Finally for those students who show special aptitude for mathematics it is the objective of the Department to prepare them to pursue advanced work in this field.

Mathematics Review

An intensive review of high school mathematics covering Algebra and Trigonometry. Required of all students who need additional preparation as determined by entrance tests in mathematics.
Three periods weekly—No credit—Fee $54.00.

Math. 7 & 8. *Fundamentals of Mathematics* *6 credits*

A course particularly designed for the students who do not expect to take mathematics beyond the first year. The aim of the course is to present the major ideas in the development of mathematics from ancient to modern times. Suitable application of these ideas to the physical and social sciences is indicated throughout the course. The importance of mathematical concepts for, and their relation to Logic, Philosophy, Art, the natural and social sciences and the history of civilization are discussed. Its primary objective is to emphasize fundamental ideas of the science and to furnish a foundation for an appreciation of its wider significance.
Fall and Spring each year

Math. 13-14. *Freshman Mathematics* *8 credits*

An intensified mathematics course covering the topics of Algebra, Trigonometry, Analytic Geometry and an introduction to the processes of differentiation and integration.
Fall and Spring each year

N. B. The material covered in Mathematics 8 and 13 is essentially the same. The differences are intensity of the latter course and the more thorough treatment of material. No student may offer both of these courses to satisfy his degree requirements.

Math. 21. *Differential Calculus* *4 credits*

Variables and functions; limits; differentiation; rates; applications of derivatives to geometrical and physical problems involving maxima and minima; differentials and a brief introduction to the process of integration; Rolle's theorem and the theorem of the mean; indeterminate forms; elementary treatment of partial derivatives and transformation of variables. Prerequisite: Math. 12, or equivalent.
Fall each year

Math. 22. *Integral Calculus* *4 credits*

Integration as the inverse of differentiation; the definite integral; integration as a process of summation; approximate evaluation of integrals; integration by parts and other methods; reduction formulas; partial differentiation; total differentials and their geometrical interpretation; multiple integrals; use of integrals in the evaluation of areas, arc lengths, volumes, surfaces, fluid pressures, work, centroids and moments of inertia; infinite series and the approximate evaluation of functions by series. Prerequisite: Math. 21.
Spring each year

Math. 101. *Differential Equations* *4 credits*

A treatment of ordinary differential equations. First order, first and higher degree differential equations; special solutions; linear equations with constant coefficients and with variable coefficients; total differential equations; operator methods; approximate solutions; applications of differential equations to geometrical and physical problems; series solutions. For Mathematics, Physics and other science students. Prerequisite: Math. 22.
Fall and Spring each year

Math. 102. *Vector and Tensor Analysis* *3 credits*

The theory of vectors and their applications to the solution of mathematical and physical problems. Linear vector functions, and matrix applications. Elements of the theory of tensors. Prerequisite: Math. 101.
Spring each year

Math. 103. *Advanced Differential Equations* *3 credits*

This course includes the treatment of special differential equations and partial differential equations and their applications. Non-linear differential equations; linear partial differential equations of first and higher order: non-linear partial differential equations of first and second order. Recommended for Physics and Mathematics majors. Prerequisite: Math. 101.
Fall each year

Math. 104. *Introduction to Statistical Analysis* *3 credits*
Curve plotting; frequency curves, averages, measures of dispersion, theory of correlation. Applications to the natural and social sciences. Prerequisite: Math. 22.
Fall 1958

Math. 105. *History of Mathematics* *3 credits*
Treats of the development of Mathematics from earliest times through the Calculus. Prerequisite: Math. 22.
Course given by special arrangement

Math. 106. *Advanced Calculus* *3 credits*
A critical study of the foundations of differential and integral Calculus; further study of the mean value theorem; series; representation of various functions in terms of power series; partial and directional derivatives of functions of several variables; space integrals, Green's and Stoke's theorems; elementary treatment of functions of a complex variable. For Physics and Mathematics majors. Prerequisite: Math. 101.
Fall each year

Math. 107. *Advanced Calculus* *3 credits*
An introductory treatment of special types of series and integrals including elliptic integrals, Fourier series and functions, Gamma and Beta functions, Bessel functions, and further treatment of functions of a complex variable. Recommended for Physics and Mathematics majors. Prerequisite: Math. 106.
Spring each year

Math. 108. *Modern Algebra* *3 credits*
An introduction to some of the simpler algebraic concepts. The number system and elementary theory of numbers. Groups, rings, polynomials over a field, matrices and determinants. Prerequisite: Math. 22 or permission of department head.
Spring 1960

Math. 109. *Theory of Equations* *3 credits*
An introduction to the theory of solution of various equations. In addition the course tends to introduce the student to many of the concepts of modern algebra. Theory of determinants and matrices is applied early in the course. Prerequisite: Math. 22.
Not offered 1958-1959

Math. 110. *Selected Topics in Advanced Mathematics* *4 credits*
This course is designed particularly for the electronics majors. Laplace transforms applied to the solution of differential equations; power series; Fourier series; Bessel functions; functions of a complex variable; vectors; vector methods. Prerequisite: Math. 101.
Spring each year

Math. 115. *Undergraduate Mathematics Thesis* *Variable credit*

For those who apply for the B.S. Degree with a major in mathematics. To evaluate the student's ability to carry out the investigation of a specific mathematical topic. The credit value will be one or two credits depending upon the results accomplished and time involved. Prerequisite: 24 credits in mathematics.

Course given by special arrangement

DEPARTMENT OF MILITARY SCIENCE AND TACTICS

Lt. Col. Louis J. Aebischer, *Chairman*; Capt. Thomas B. Feeney, Major John McCreary, Major Albert Leister, and military staff

The ROTC instruction is divided into a Basic Course (Freshman and Sophomore years) for which eight academic credits are allowed, and an Advanced Course (Junior and Senior years) for which twelve academic credits are allowed. The enrollment in each course is for a period of two years. Having enrolled in a course a student is required to complete that course as a prerequisite for graduation, unless he is excused from the requirement by authority of the Secretary of the Army. The primary objective of the ROTC system of education is to qualify selected students to be commissioned reserve officers in the Army of the United States. The secondary objective of the course is to teach the student the fundamentals of intelligent citizenship and be given such general basic military training as well as benefit him and the service when he becomes a member thereof and finally to afford him a means for practical training in organization, leadership and discipline which will be of value to him in a military or commercial career.

Enrollment in the Advanced Course is limited to students who have successfully completed the Basic Course, or are veterans of the Armed Forces, and are selected for continuance in the ROTC by the President of the University, upon recommendation of the Professor of Military Science and Tactics. Officer type uniforms and all military textbooks are supplied without cost to all students. In addition, each advanced student receives a monthly monetary allowance based on daily commutation of subsistence allowance at 90 cents a day. Advanced course students (only) are required to attend a six weeks summer camp at the end of their Junior year in college.

In addition, the Military Science students will be required to participate as a unit in University directed activities at least once every semester. Such events will include the Veterans' Day parade, Home Coming Day Football Game, Armed Forces Day parade and other events in which the University officials desire to have the Cadet Corps present. Some of these events will be at times other than normal school days or hours. Participation is required and will be considered a regularly scheduled class for attendance purposes.

M. S. 1 & 2. *First Year Basic, General Military Science* *4 credits*

Introduction to military science; military organization, history of the ROTC; American military history, colonial to present; individual weapons and marksmanship; school of the soldier and exercise of command. Two hours class work and a minimum of one hour a week of drill. (See note above.)
Fall and Spring

M. S. 3 & 4. *Second Year Basic, General Military Science* *4 credits*

A comprehensive study of crew-served weapons and related gunnery; map and aerial photograph reading; school of the soldier and exercise of command. Prerequisite: MS 1 and 2, or equivalent advanced standing. Two hours class work and a minimum of one hour a week of drill. (See note above.)
Fall and Spring

M. S. 5 & 6. *First Year Advanced, General Military Science* *6 credits*

A comprehensive study of small unit tactics and communication, organization, function and mission of all arms and services; military teaching methods; leadership; school of the soldier and exercise of command. Prerequisite: MS 1 and 2, 3 and 4, or equivalent advanced standing. Four hours class work and a minimum of one hour a week of drill. (See note above.)
Fall and Spring

M. S. 7 & 8. *Second Year Advanced, General Military Science* *6 credits*

A comprehensive study of the following: Logistics; operation to include, command and staff, combat orders, military intelligence, the military team and training management; military administration and military justice; service orientation to include, the role of the United States in world affairs, leadership, and officer indoctrination, school of the soldier and exercise of command. Prerequisite: MS 5 and 6. Four hours class work and a minimum of one hour a week of drill. (See note above.)
Fall and Spring

DEPARTMENT OF MODERN LANGUAGES

Mr. Cimini, *Chairman*; Dr. Kucas, Mr. McKenna, Mr. Mann, Mr. Mastri

The Modern Language Department undertakes:

1. to give the student who plans to pursue studies in business, science, the arts or the professions the requisite skills for reading, writing and speaking foreign languages.

2. to train the student in logic and precision of thought and expression by comparative study of his own and foreign languages.

3. to develop the aesthetic and critical faculties of the student by the reading and appreciation of the best foreign authors.

4. to give the student an insight into the evolution of European thought and the history and culture of Europe as reflected in its literature.

At the beginning of the freshman year a placement test is given to students offering two years or more of high school credit in a modern language. Students passing this test will be admitted to the intermediate course in that language. Students failing in this test, and students admitted with less than two units in a language, are required to take the elementary course in that language.

FRENCH

French 1 & 2. *Elementary French* — *6 credits*

A course designed to impart a solid foundation in grammatical principles and the mastery of a basic vocabulary; reading and composition, especially written.
Fall and Spring each year

French 21 & 22. *Intermediate French* — *6 credits*

A course which includes a review of French grammar and an introduction to French literature and civilization by the reading and discussion of appropriate works.
Fall and Spring each year

French 104 & 105. *Seventeenth Century French Literature* — *6 credits*

Authors of the 17th century are read and discussed. A study is made of the classical movement in French thought and culture, with emphasis given to such authors as Corneille, Racine, Moliere and Boileau. Course conducted in French.
Fall and Spring 1958-1959

French 110 & 111. *History of French Literature* — *6 credits*

The main lines of the evolution of French culture as seen in the literature of the country from the twelfth century to the contemporary period, the whole studied against the background of the aesthetic, philosophical, political, social and economic development of European civilization in general.
Not offered 1958-1959

French 112. *Undergraduate Research Thesis in French Literature* — *1 credit*

Open to students of proven ability in French. Assignment of the problem to be arranged in each case. Prerequisite: French 21 or equivalent.
On request

French 115 & 116. *History of French Civilization* *6 credits*
A course given jointly by the Departments of Modern Languages and of History; the study of the rôle of France in the political, economic, social and intellectual development of the West. If conditions warrant, this course may be given in English.
Not offered 1958-1959

French 117 & 118. *Eighteenth Century French Literature* *6 credits*
The course of the French Enlightenment from the *libertins* to the Revolution.
Not offered 1958-1959

French 119 & 120. *Nineteenth Century French Literature* *6 credits*
The main currents of French literature and thought from the romantic reaction to the emergence of symbolism.
Not offered 1958-1959

French 123 & 124. *Advanced French Grammar and Conversation* *6 credits*
A course which includes: a thorough study of French grammar; composition, oral and written, free and by translation from the English; study of the inter national phonetic alphabet and practice in public speaking in French.
Not offered 1958-1959

French 125. *Scientific French* *3 credits*
A course desgned to prepare the student for library research in French in the fields of the biological and physical sciences. Readings. This course may be conducted in English.
Course offered by special arrangement

German

Germ. 1 & 2. *Elementary German* *6 credits*
A complete course in the fundamentals of the German language. Emphasis on reading of graded texts, with written, oral and aural exercises.
Fall and Spring

Germ. 21 & 22. *Intermediate German* *6 credits*
Reading from modern authors of moderate difficulty. Oral and written exercises. Systematic review of German grammar. Prerequisite: See general introduction.
Fall and Spring

Germ. 101 & 102. *Advanced German* *6 credits*
Selected texts in prose and poetry. Advanced practice in conversation and composition.
Not offered 1958-1959

Germ. 103 & 104. *Scientific German* *6 credits*
The aim of this course is to give the preprofessional and science student a general, well rounded knowledge of Scientific German. Readings are selected from the fields of Physiology, Botany, Zoology, Chemistry and Physics, and take on the aspect of a survey of general science, thus preparing the student directly for further work in German in his own particular field.
Course offered by special arrangement

SPANISH

Span. 1 & 2. *Elementary Spanish* *6 credits*
Aim: solid foundation in grammatical principles and mastery of a basic vocabulary. The course includes intensive drill in pronunciation, active use of vocabulary and grammatical principles in written and oral exercises.
Fall and Spring

Span. 21 & 22. *Intermediate Spanish* *6 credits*
Aim: increased facility in active use of basic grammar and vocabulary, enlarged reading ability, and an introduction to Spanish and Spanish-American civilization. The course includes grammatical review, written and oral composition, reading of selected modern prose of intermediate difficulty. Prerequisite: Span. 1 & 2.
Fall and Spring

Span. 101 & 102. *The Modern Novel* *6 credits*
A study of the short story and novel of Spain and Spanish-America in the late 19th and early 20th centuries. Readings in the most important authors, with background lectures on the history of the novel and discussions in Spanish.
Not offered 1958-1959

Span. 103. *Advanced Grammar and Composition* *3 credits*
A grammar review emphasizing advanced topics and the idiomatic use of Spanish in set themes and free compositions, with the aim of developing the ability to write clear and fluent Spanish.
Not offered 1958-1959

Span. 104 & 105. *Commercial Spanish* *6 credits*
A study of vocabulary and forms used in commerce. Practice in writing of letters and other business forms. Reading of Spanish models as a basis for free composition. Oral practice in Spanish.
Not offered 1958-1959

Span. 106 & 107. *The Golden Age* *6 credits*

A study of the development of the novel, with the culmination of all forms in Cervantes; and of the drama, reaching its perfection in Lope de Vega and Calderon. Readings in the major authors.
Not offered 1958-1959

Span. 108. *Conversational Spanish* *3 credits*

A course designed to enable the student to express himself in Spanish with clarity and fluency. Stress placed on pronunciation, idiomatic use of the language, and practice in oral composition. Course conducted in Spanish.
Not offered 1958-1959

Span. 109 & 110. *History of Spanish Civilization and Literature* *6 credits*

A survey of the political, artistic, literary and scientific progress of Spain, with readings of each period. Prerequisite: Spanish 21 and Spanish 22.
Fall and Spring 1958-1959

DEPARTMENT OF PHILOSOPHY

Fr. Baum, S.J., *Chairman*; Mr. Holden, Fr. Jarvis, S.J., Fr. McNicholas, S.J., Fr. McSorley, S.J., Fr. Suppe, S.J.

The aim of education is to equip the student with a mature, reflective and receptive outlook on life. Philosophy's role in pursuing this goal lies in providing, as far as man's reason can, a comprehensive view of the basic structure and meaning of reality. Philosophy is at once distinct from the positive sciences in its methodology and at the same time it provides the integrating principles whereby man can properly interpret the universe in which he lives. Consequently the philosopher must be able to think clearly and express himself accurately. But he must also possess an intelligent appreciation of all the major attempts by man to answer his perennial questions. The broad principles of the Scholastic tradition will be proposed as the point of departure and rational framework for that ideal total wisdom which is docile to every manifestation and revelation of the true and the good.

Students wishing to major in Philosophy must take the Philosophy courses required of all students, and in addition Philosophy 113-114, History of Philosophy; and Psychology 121, Experimental Psychology, for a total of 34 semester hours. Since required courses constitute 26 hours of this major students majoring in Philosophy must carry a second major, fulfilling departmental requirements as listed.

Phil. 101. *Introduction to Logic* *3 credits*

Logic is the science of correct thinking. It is concerned with those relations which obtain between terms and propositions as such, regardless of the particular objects to which they refer. Hence it is a prerequisite not only to

philosophy but to all sciences. The traditional logic of Aristotle, as developed by the Stoics and scholastic philosophers, is presented as the best introduction to logic.
Fall each year

Phil. 102. *Philosophy of Being I* *2 credits*
The student begins the Philosophy of Being with a brief introduction to its particular object and method. The study of Being as such begins by reflection on the objects of experience in order to discover their intrinsic structure through metaphysical analysis. The point of departure for this reflection is the historic problem of change, limitation, the one and many, and the notion of Being as such. Prerequisite: Phil. 101.
Fall each year

Phil. 103. *Philosophy of Being II* *2 credits*
A study of the structure of finite beings is completed by the study of their extrinsic causes. A further reflection on the world of experience leads the student to a study of efficient and final causality. The properties of being are also analyzed. Prerequisite: Phil. 102.
Spring each year

Phil. 104. *Natural Theology* *3 credits*
A study of efficient and final causality leads logically, as it did historically, to the question of the existence of God and His relation to the world. The question, what is God, leads to a study of His essence, attributes and activities. Prerequisite: Phil. 103.
Spring each year

Phil. 105. *Philosophy of Man I* *4 credits*
The philosophical consideration of man begins with the delineation of the philosophic as contrasted with the scientific study of man. Throughout, the two disciplines will be kept clearly distinct but, for the total picture of man, an integration of the two will be sought. This course will study life in general, its nature and origin, and plant and animal life in particular. The specific study of man will begin with a study of human sense life and an empirical study of man's rational life. Prerequisite: Phil. 102-103.
Fall each year

Phil. 107. *Philosophy of Man II* *2 credits*
A. Human Rational Life — This course will study man's suprasensual powers, the intellect and will and freedom of choice. The nature and attributes of the human soul itself will complete this analysis of the constitution of man. Finally, man will be viewed integrally in the study of him as a person. The psychoanalytic theory and the experimental approach to character will be assessed and the philosophical implication of human personality will be explored. Prerequisite: Phil 105.
Spring each year

Phil. 108. *Philosophy of Man III* *2 credits*

B. Man's Knowledge of Reality — This treatise will be considered the climax of our philosophical program. In treating the problem that has given modern philosophy of its distinctive character, it will afford a point of contact and integration of the student's training in Scholastic Metaphysics and Psychology with the philosophical environment prevalent today. The epistemological problem is complex, for man has various types or levels of cognition. The nature, validity, and interrelationship of these different levels is *the* philosophical question today and one's ability to differentiate and evaluate the hierarchy of sciences in the unity of consciousness marks his philosophical maturity. Descartes, Kant, Comte are some of the key figures in the understanding of the various types of realism, idealism, empiricism, logical positivism and scientism which must be assessed in their relation to Scholastic Philosophy. Prerequisite: Phil. 107.
Spring each year

Phil. 110. *Philosophy of Human Conduct I: Ethical Theory* *4 credits*

In pursuit of a philosophical validation of the ethical fact, this course will, as a preliminary, study the purpose of human existence and the nature and constitution of responsible human action. Ethics properly concerns itself with the standard of moral goodness and evil and of moral obligation. This latter involves an understanding of the nature and properties of the natural moral law. The relations of moral law to concrete acts entails a study of conscience and virtue. A consideration of the nature of rights and duties affords a link with applied ethics. Prerequisite: Phil. 102-103-104.
Fall each year

Phil. 111. *Philosophy of Human Conduct II: Individual and Social Ethics* *4 credits*

The philosophy of human conduct is here applied to the activities of individuals and societies. This entails, firstly, a consideration of the moral implications of man's relation, primarily viewed as an individual, to God as the object of religion and to himself as a being equipped with a variety of powers. Since it is difficult to isolate any human conduct from society, the final and largest section of this course will concern itself specifically with man as a social being. The nature and origin of society in general and the societal character of marriage will receive due treatment. Emphasis will be placed on civil society, its origin, authority, and extension. This will also entail laying the ground principles of morality for the various professional fields and for industrial problems. The question of international community will complete the picture. Prerequisite: Phil. 110.
Spring each year

Phil. 113. *History of Philosophy: Ancient and Medieval* *3 credits*
A survey of the History of Philosophy from its beginnings in the West to its Scholastic flowering in the Middle Ages. The various problems will be seen in their origins and traced through the master philosophers; Socrates, Plato, Aristotle, St. Augustine, St. Thomas Aquinas. Included will be a continuous discussion of the inter-relations of philosophy with the arts, the sciences and practical life.
Course offered by special arrangement

Phil. 114. *History of Philosophy: Modern and Recent* *3 credits*
The development of modern thought, from Bacon and Descartes, through Spinoza, Leibnitz, Hobbes, Locke, Berkeley and Hume to Kant and Hegel. Neo-Scholasticism and its relation to other contemporary philosophical movements.
Course offered by special arrangement

DEPARTMENT OF PHYSICS

Dr. Harper, *Chairman*; Mr. Duffy, Mr. McGinnis, Mr. McPherson

The science of Physics is concerned principally with matter and energy, the nature of each, and with their interactions. It is the fundamental science for most branches of engineering and has innumerable applications in medicine, industry and everyday life. The objectives of the Department of Physics are: (1) to impart a body of knowledge of the general principles of Physical Science and to show their applications to human problems; (2) to aid the student in acquiring scientific method and in developing a quantitative frame of mind in dealing with his problems; (3) to train the student in logical and accurate methods of observation, measurement and analysis; (4) to provide the student with adequate training in the fundamentals of Physics to enable him to pursue medical, engineering and other courses of study; (5) to encourage and train those students who show exceptional aptitude for the science of Physics for a career in the teaching of Physics, or in industrial work in this field, and to encourage those students who have the capacity to pursue graduate work in Physics.

Phys. 1. *General Physics* *4 credits*
A fundamental college course in mechanics and heat. For pre-medical, pre-dental and other students who need one year of college physics. Three hours lecture and recitation and two hours laboratory. Prerequisites: Math 11 & 12.
Fall each year

Phys. 2. *General Physics* *4 credits*
A continuation of Physics 1, including electricity and magnetism, sound and light. Three hours lecture and recitation and two hours laboratory. Prerequisite: Physics 1.
Spring each year

Phys. 11. *Elements of Physics* *4 credits*

A basic college course in mechanics and heat, designed for physics and electronics majors in which methods of the calculus are applied. Three hours lecture and recitation and two hours laboratory. Corequisite: Math. 21.
Fall each year

Phys. 12. *Elements of Physics* *4 credits*

A continuation of Physics 11, including sound, light, electricity and magnetism. Methods of Calculus are used. Three hours lecture and recitation and two hours laboratory. Prerequisite: Physics 11; Corequisite: Math. 22.
Spring each year

Phys. 18. *Elementary Mechanics* *4 credits*

An elementary treatment of the statics and dynamics of particles and rigid bodies, elastic bodies, hydrostatics and hydrodynamics. For engineering students. Three hours lecture and recitation and two hours laboratory. Prerequisite: Math. 13.
Spring each year

Phys. 19. *Elementary Heat, Light and Sound* *4 credits*

Basic treatment of the effects of heat, thermometry, calorimetry, transfer of heat and elementary thermodynamics; periodic motions, vibrating bodies, sound waves and acoustics; photometry, reflection and refraction of light, interference, polarization, color and spectra. For Engineering students. Three hours lecture and recitation and two hours laboratory. Prerequisite: Physics 18.
Fall each year

Phys. 20. *Elementary Electricity and Magnetism* *4 credits*

Basic treatment of magnetism, electrostatics, direct currents and circuits, electromagnetic induction, alternating currents and circuits, electrical machines and devices, electromagnetic waves; introductory electronics and atomic physics. For Engineering students. Three hours lecture and recitation and two hours laboratory. Prerequisites: Physics 18; Math. 14.
Spring each year

Phys. 101. *Heat and Thermodynamics* *3 credits*

An intermediate course covering the topics of conduction, convection and radiation, the first and second laws of thermodynamics, entropy, thermodynamic cycles, the steam engine, refrigeration, thermodynamic functions and applications of thermodynamics; practice in the use of steam tables and charts.

A brief treatment of kinetic and statistical theory of gases is included. This course is recommended for Physics majors. Three hours lecture and recitation. Prerequisites: Physics 12 or 19; Math. 22.
Not offered 1958-1959

Phys. 102. *Mechanics* — *3 credits*

An introduction to theoretical mechanics which deals with the statics and dynamics of particles and extended bodies. It covers the topics of motion of bodies under the influence of conservative and dissipative forces, momentum and energy relations, theory of potential, generalized co-ordinates and Lagrange's equations of motion. This course is required of physics majors. Three hours lecture. Prerequisites: Physics 11, or 18; Math. 101.
Spring 1959

Phys. 103. *Light and Optics* — *4 credits*

A second course of light which treats geometrical and physical optics in greater detail than in the elementary courses. The topics include lenses and mirrors, refraction of light at surfaces, dispersion, lens combinations, optical instruments, spectra, interference, diffraction and polarization. The laboratory exercises are to acquaint the student with the handling and use of optical instruments in making optical measurements. Three hours lecture and three hours laboratory. Required of Physics and Electronics majors. Prerequisites: Physics 12 or 19, and Math. 22.
Fall 1958

Phys. 104. *Electricity and Magnetism* — *4 credits*

An analytical treatment of electrical and magnetic theory including the topics of electrostatic fields, direct electric current circuits and measurements and magnetism. Required of Physics majors. Three hours lecture and two hours laboratory. Prerequisites: Physics 12, or 20; Math. 101 (can be taken concurrently).
Spring 1959

Phys. 104E. *Introduction to Electromagnetics* — *4 credits*

A one-semester intermediate electricity and magnetism course designed particularly for the electronics majors including the topics of electrostatic field theory, magnetic fields, Maxwell's equations and applications to electromagnetic wave propagation. This course is required of Electronics majors. Three hours lecture and two hours laboratory. Prerequisites: Physics 12; Math. 110.
Fall 1958

Phys. 105. *Electricity and Magnetism* *4 credits*
A continuation of Physics 104. The topics include electromagnetic induction, transients, alternating current circuits and measuring instruments and electromagnetic fields and waves. Required of Physics majors. Three hours lecture and two hours laboratory. Prerequisites: Physics 104; Math. 101.

Phys. 106. *Electron Tubes and Circuits* *4 credits*
The fundamental course on electron tubes and circuits. General principles of vacuum tube operation; power supplies and filters; electron tube characteristics; simple amplifiers; general amplifier theory; tuned circuits. This course is required of Electronics majors and recommended as an elective for the Physics majors. Three hours lecture and two hours laboratory. Prerequisites: Physics 12, or 20; Math. 22.
Fall each year

Phys. 107. *Electron Tubes and Circuits* *4 credits*
A continuation of Physics 106. Power amplifiers, analytical and graphical methods; oscillators, modulators and detectors; radio and television circuits; computer circuits; theory and applications of transistors. Three hours lecture and two hours laboratory. This course is required of Electronics majors. Prerequisite: Physics 106.
Spring each year

Phys. 108. *High Frequency Electromagnetic Wave Transmission* *4 credits*
Transmission of UHF signals; characteristics of transmission lines; theory of UHF measurements; electromagnetic wave theory. For Electronics majors. Three hours lecture and two hours laboratory. Prerequisites: Physics 107; Physics 104E (may be taken concurrently); Math. 101.
Fall each year

Phys. 109. *Microwave Theory and Circuits* *4 credits*
Theory of microwave transmission through waveguides; microwave tubes and signal generators; microwave measuring instruments, receivers and transmitters; radar systems. For Electronics majors. Three hours lecture and two hours laboratory. Prerequisites: Physics 108; Math. 110.
Spring each year

Phys. 110. *Modern Physics* *3 credits*
A mathematical treatment of various phases of modern Physics which includes the topics of kinetic theory, electrical discharges in gases, electron theory, atomic structure, atomic spectra, x-rays and other electromagnetic radiations. This course is required of Physics majors. Three hours lecture. Prerequisites: Physics 12 or 20; Math. 101.
Fall 1958

Phys. 111. *Modern Physics* *3 credits*

A continuation of Physics 110. This course is devoted to the treatment of quantum theory, photoelectricity, radioactivity, nuclear particles, nuclear reactions, induced radioactivity, nuclear instrumentation and cosmic rays. This course is required of Physics majors. Three hours lecture. Prerequisite: Physics 110.

Spring 1959

Phys. 112. *Sound* *3 credits*

An intermediate course which correlates principles and techniques of sound, light, electricity and mechanics. Vibration theory, wave transmission in different media, interference and diffraction and acoustic impedance are some of the topics illustrating this interrelationship. Reflection and absorption of sound waves; reproduction of sound, and loudspeakers. Architectural acoustics. This course is required of Electronics majors. Three hours lecture. Prerequisites: Physics 12 or 20; Math. 101.

Phys. 114. *Advanced Physics Laboratory* *1 credit*

This course includes experiments, not included in other courses, such as the charge and specific charge of the electron, thermionic emission, gaseous discharges, photoelectric emission and atomic spectra. Required of Physics majors. One three hour laboratory period. Prerequisites: Physics 103, 104 (may be taken concurrently).

Fall 1958

Phys. 115. *Advanced Physics Laboratory* *4 credits*

A continuation of Physics 114. The experiments include thermoelectricity, radiation and thermal conduction, x-rays, radioactivity measurements and nuclear reactions. For Physics majors. One three hour laboratory period. Prerequisites: Physics 110 and 114.

Spring 1959

Phys. 120. *Undergraduate Physics Thesis* *1 credit*

For those who apply for the B.S. degree with a major in Physics. This work is to evaluate the student's capacity for individual study and research in connection with a specific physical problem. Assignment of the problem and credit to be arranged in each case. Prerequisites: 24 credits in Physics; 20 credits in Math.

Course offered by special arrangement

DEPARTMENT OF SOCIAL SCIENCES

Mr. Baldi, *Chairman*; Mr. O'Keefe, Mr. Schneck, Mr. Sheehan, Mr. Scully, Mr. Walsh

Purpose: To provide both terminal and prospective graduate students with a basic understanding of the sociological and economic forces which are a part of the structure of our society. The Economics courses are intended

for all Social Science majors and Business Administration majors. Courses in Sociology are intended for all Social Science majors. Within the Sociology major there is an opportunity for those interested in social work to follow a pre-professional orientation to the field.

A major in Economics shall consist of Economics 23 and 24, 25 and 26, plus 18 elective credits in Economics, including Bus. 103, 104, 105, 106.

A major in Sociology shall consist of Sociology 21 and 22, plus 18 to 21 elective credits in Sociology. Certain Psychology courses may be substituted for some of these elective credits with the authorization of the Chairman of the department.

Economics

Econ. 23. *Principles of Economics* — *3 credits*

An introduction to the principles of economic theory and their application to present day problems. Economic organization of the U. S.; consumption, production and marketing, money and credit, prices, wage theories, and the relation of employer and employed, capital and interest, rents, profits and taxation.
Fall each year

Econ. 24. *Principles of Economics* — *3 credits*

Continuation of Econ. 23. Analysis of national income and spending, monetary and fiscal policies as an aid to controlling business cycles; foreign exchange and trade, analysis of modern capitalism and alternative economic systems. Prerequisite: Econ. 23.
Spring each year

Econ. 25. *Financial Statement Analysis* — *2 credits*

Meaning and purpose of accounting; detaailed study of balance sheet, profit and loss statements, business papers and negotiable instruments, work sheet and summary statements. Open only to Economics majors. Prerequisite: Econ. 24.
Fall each year

Econ. 26. *Financial Statement Analysis* — *2 credits*

Continuation of Econ. 25. Partnership formation and operation, financial statements of partnerships; partnership dissolution and liquidation, organization and operation of corporations. Detailed study of classification and accounting procedures, capital stocks, bonds, mortgages, sinking funds and reserves. Analysis and interpretation of corporate financial statements. Prerequisite: Econ. 25.
Spring each year

Econ. 102. *History of Economic Thought* *3 credits*

This course is a survey of the wide field of economic thought. Particular stress is placed on the economic and socio-political factors of the time. Prerequisite: Econ. 24.

Fall each year

Econ. 103. *Economic Geography* *3 credits*

A study of the physical environment which in a large sense sets the stage for all economic activities. Specifically, the influence of climate, land forms and soils and their distribution on the surface of the earth are investigated. Emphasis is placed upon the relation of physical factors and economic conditions to the production and exchange of the world's leading commercial products. The North American, South American and European continents are studied, with emphasis being placed on their relationship to the United States. Prerequisite: Econ. 24.

Spring each year

Econ. 104. *American Economic Development* *3 credits*

The background of European expansion in America. The American Revolution as a social movement. The economic forces that conditioned the development of the United States prior to 1860. The economic basis of Southern Secession and the breakdown of the confederacy. The economic aspects of the reconstruction policy, agriculture and agrarian discontent. The emergence of large-scale enterprise and its attendant problems. The development of the United States as a major world power. The economic and social problems of World War I and the post-war period. The great depression, boom, World War II and post-war inflation periods and problems of current significance. No prerequisite.

Fall each year

Econ. 105. *Labor Law and Legislation and Industrial Relations* *3 credits*

The study of the economic forces which have engendered labor legislation, and a case analysis of the effect of resulting conditions on employer-employee relations. A survey of the Acts of Congress of the United States and of the legislature of the Commonwealth of Pennsylvania in the field of industrial relations. Evolution of legislation, the history of industrial disputes and the influence upon labor-management relations. Summary of the history, theory and evolutions of labor combinations. Management as evidenced by Federal and State legislation and court decisions. Early doctrines. Structure and purpose of labor combinations. Labor injunctions. Lawful and unlawful striking and picket activity. The Clayton Act. The Norris-LaGuardia Act. Prerequisite: Econ. 24.

Fall each year

Econ. 106. *Labor Law and Legislation and Industrial Relations* *3 credits*

Continuation of Econ. 105. The Boycott. Labor and the Sherman Act. The National Labor Relations Act. The Railway Labor Act. Incidents of union membership. State laws. The Fair Labor Standards Act. Prerequisite: Econ. 105.
Spring each year

Econ. 150. *Labor Problems* *3 credits*

History of labor as a social and economic group; development and philosophy of trade unions; labor legislation; methods of dealing with insecurity and inadequate income; organizational and jurisdictional problems of unions; labor-management relations. Each student will complete a project applying a definite phase of the course to an assigned problem.
Spring each year

Sociology

Soc. 21. *Basic Sociology* *3 credits*

An introduction to basic sociological principles covering the basis, structure, and functions of society. Man's biological and cultural heritage and his social nature, demography, ecology, types of communities; the social processes of competition, conflict, co-operation, accommodation and stratification and their relationship to social control, the family, economic, governmental and religious institutions.
Fall each year

Soc. 22. *Social Problems* *3 credits*

An analysis of the major social problems affecting modern society. Poverty dependency, physical illness and handicaps, mental deficiency, mental and emotional illnesses, problems of old age, family breakdown, transiency, housing, crime and delinquency, standards of living and race problems. Social legislation bearing on the above, resources for treatment and prevention, and deficiencies in existing programs.
Spring each year

Soc. 103. *Criminology and Penology* *3 credits*

Contributions of the various schools of thought to the development of the science of criminology. Physical, psychological and environmental factors in crime. The role of the home, family and social relationships.
The methods and instrumentalities of criminal justice, the police, courts, prisons, probation and parole will also be discussed, as will a program of crime prevention.
Fall 1958, Spring 1960

Soc. 104. *Social Origins* *3 credits*

A survey of the present state of knowledge in the field of cultural anthropology. Analysis of the modern primitive cultures for the light they shed on the possible stages in man's cultural acquisitions. The social, economic, religious and political structures and processes in various contemporary primitive societies and the corresponding structures and practices in modern civilization.
Fall 1958

Soc. 105. *Sociological Theories* *3 credits*

A survey of the development of sociological principles beginning with Comte and including a comparison of the modern major schools of thought such as the mechanistic, geographical, demographic, biological, economic, sociologistic and integrative.
Course offered by special arrangement

Soc. 106. *Community Organization* *3 credits*

The course aims at a general introduction to the field and process of community organization, both as a field of social work, and as a field of human endeavor. Stress is laid on the co-ordination and financing of welfare activities, methods of appraising community needs and resources, welfare planning and the initiation of welfare services. Local, state, regional, national and international services of a voluntary and governmental nature will also be discussed.
Fall 1959

Soc. 107. *Child Welfare* *3 credits*

Philosophy and development of child welfare in the United States. Educational, health, recreational and child labor regulations. Study and treatment of dependent, neglected, delinquent and illegitimate children in their own homes, foster homes and institutions. The administration of child care and protective programs on Federal, State and local level will also be studied.
Spring each year

Soc. 109. *The Field of Social Work* *3 credits*

Growth of social work as a professional endeavor. The scope of social work; case work in the medical, psychiatric, family and child welfare and guidance field; community organization as exemplified in the community chest and council, social research, social planning, social group work. Evolution of training for social work. Schools of social work, national associations, number of social workers, demand for social workers, salaries. Current trends in social work.
Spring 1960

Soc. 110. *Marriage and Family Life* *3 credits*
This course is intended to cover the practical problems of every day living encountered in marriage and family living. The major focus of attention will be given to the preparation for marriage, selection of a partner, financing the marriage, harmonies and discords in the marriage, problems of parenthood and family administration, family crises and ways of meeting them, and the successful and happy marriage and family union. Restricted to seniors.
Fall each year

Soc. 111. *Urban Sociology* *3 credits*
A sociological analysis of the development and effects of modern urbanization on human institutions, population trends and social relationships. The external interrelationships, form and structure and organized life in cities, patterns of urban structure and cities of the future. The role of politics, social agencies and elements making for organization and disorganization.
Spring 1959

Soc. 112. *Methods and Techniques of Social Research* *3 credits*
Ways of obtaining, recording, interpreting, and publishing research materials; the case study, life history, survey, questionnaire, interview, and the use and interpretation of statistical procedures.
Fall each year

Soc. 113. *Juvenile Delinquency* *3 credits*
Juvenile delinquency as a social problem. Methods of treatment and prevention, including juvenile courts, clinics, probation, parole, correctional institutions, child placement and recreational programs.
Fall 1959

Soc. 114. *American Minority Groups* *3 credits*
A study of the cultural background distribution, assimilation and other adjustments of minority groups; along with a survey of the problems arising from the contacts of these people who differ as to race and culture. The concepts of prejudice and discrimination as opposed to the democratic ideology will be considered. This course is an attempt to arrive at an understanding of the American race problem and sociological approaches to the reduction of intergroup hostility.
Spring 1959

Soc. 120. *Special Problems* *1 credit*
General prerequisites, senior standing, sociology major, and permission of the instructor. Done on an individual basis. Assigned readings, individual research, informal conferences and written reports. Individual has choice in field of sociological study.

A. Sociological theory
B. Race relations
C. The family
D. Research methodology
E. Criminology and Penology
F. Anthropology
G. Social Psychology
H. Educational sociology
I. Social Organization

Spring each year

DEPARTMENT OF THEOLOGY

Fr. Herlihy, S.J., *Chairman*; Fr. Hammett, S.J., Fr. Nash, S.J., Fr. Osterle, S.J., Fr. Trundle, S.J.

The program in theology at the University of Scranton has been organized upon the fundamental principle that theology is something vital, which must be lived as well as understood. It is not intended to train theologians but rather to form thoroughly enlightened and strongly motivated Catholic gentlemen, bent upon attaining their full stature in the Mystical Body of Christ.

Theol. 1. *The Quadriform Gospel* — *2 credits*

The origin and literary type of the Gospels, source books of Christian origins, their historical and religious value. The structure, content and characteristics of each of the four Gospels in its entirety.

Fall each year

Theol. 2. *The Life of Christ* — *2 credits*

The life of Christ and the work He came to accomplish as revealed in a harmony of the Gospels, with commentary. The manifestation of the Divine Person Who is God and Man. Emphasis on His teaching and redemptive missions and His example as a model of Christian personality.

Spring each year

Theol. 21. *Theology of the Incarnation and the Redemption* — *2 credits*

The creation, Elevation, and Fall of Man; the Incarnation and its redemptive purpose studied theologically both from Tradition and Sacred Scripture; Mariology. the Sacrifice of the Cross, and the Sacrifice of the Mass studied dogmatically and liturgically; participation in the priesthood of Christ through Baptism, Confirmation and Holy Orders.

Fall each year

Theol. 22. *The Organization and the Inner Nature of the Church* *2 credits*

Origins of the Church as depicted in the Gospels, the Acts of the Apostles, and St. Paul's Epistles to the Corinthians, Colossians, Philippians, and Ephesians. Function of the Church as the continuation of the Incarnation of Christ; its constitution, its teaching office, and the sources of its teaching. The inner nature of the Church as the Mystical Body of Christ, and the role of the Holy Spirit, its Soul, as seen in the scriptural sources and the Papal Encyclicals and the Mystical Body of Christ. A survey history of the Church with particular emphasis on the views of Protestant denominations concerning the nature of the church of Christ.
Spring each year

Theol. 101. *The Theology of the Individual* *2 credits*

Man's progress toward God; Divine Providence; the Indwelling of the Holy Spirit in the just; actual and habitual grace; infused virtues and gifts. The teaching of St. Paul on justification in the epistles to the Romans and Galatians. The salvific will of God, and the universality of His grace. Predestination. The nature of efficacious grace. The grace of Final Perseverance. Penance, Indulgences, Extreme Unction. The four last things, with emphasis on the Beatific Vision, and its object, the Triune God.
Fall each year

Theol. 102. *The Spiritual Formation of Laymen, and their Participation in the Apostolate* *2 credits*

Catholic dogmatic truths concerning Christian perfection applied to the life of laymen with the aim of promoting their spiritual life and their participation in Catholic Action:

(1) The nature of Christian perfection and the obligation of striving for it. The theological virtues, especially Christian charity, and its exemplification by Christ; also the moral virtues, and the relation of natural virtues to supernatural. Practical aspects of the theology of the Sacraments of Penance and the Eucharist. The ascetical practice of mortification and penance, techniques for resisting temptations, methods of prayer, the invocation of angels and saints, Catholic devotions.

(2) The Theology of Catholic Action. The modern role of laymen as mediators between the temporal and spiritual orders, consequent on the rise of Liberalism and Secularism. The collaboration of the laity and the clergy in the Apostolate of Christ. The stages of the lay Apostolate, and the practical organization and method of Catholic Action.
Spring each year

Theol. 110. *The Catholic Philosophy of Religion* *2 credits*

The fact, the universality, the nature, and the origins of Religion. The multiplicity of religions, and of religious errors. The validity of religious knowledge natural and supernatural, and the criteria of supernatural revelation. The evidence for the genuinity, integrity, and historicity of the Gospels, and of the claims of Christ regarding Himself. The continuity of the Roman Catholic Church with the "Primitive" Christian Church, and its development in the organization and doctrine.
Fall each year

Theol. 111. *Christian Marriage: The Church and the Social Order* *2 credits*

(1) The Divine Institution, the essential properties, and the Sacramentality of Christian Marriage; its blessings (Children—love—holiness). The errors and vices opposed to it. Morals for the married, and the Canon Law of the Church concerning marriage.

(2) The Christian social, economic, and cultural program in the temporal order, chiefly as enunciated in the Papal Encyclicals and other pronouncements on topics such as the family; education; relations between Church and State; ownership, property, labor, security, wages; religious toleration, and interdenominational relations, etc.
Spring each year

Religious Organizations

LEAGUE OF THE SACRED HEART

The League of the Sacred Heart and Apostleship of Prayer is the oldest organization at the University of Scranton; it was founded in 1906 and at that time aggregated to the central office of the League. Membership is open to all Catholic students. The League has for its purpose to foster among its members a sincere devotion to the Sacred Heart and, by the union of its members in prayer, to make reparation for sin and promote the apostolic work of the Church.

Moderator: Reverend Gordon Henderson, S.J.

THE SWORDSMEN

The Swordsmen (The Sodality of Our Lady), under the primary title of the Immaculate Conception and with Saint Aloysius as its secondary patron, was founded at the University of Scranton on December 6, 1942, with the approval of the Bishop of Scranton and subsequently aggregated to the Roman Prima Primaria Sodality. Its object is to foster filial devotion to the Mother of Christ and the practice of virtue and piety among its members.

They conduct the Annual Mission Bell Dance for the benefit of the Jesuit Missions in India. They sponsor the May Devotions held on the campus. They operate a pamphlet rack. They hold discussions on Mariology in conjunction with Marywood College. They teach catechism in parishes around Scranton. They act as promoters of the League of the Sacred Heart and the Apostleship of Prayer. They keep the University informed of the pictures approved by the Legion of Decency.

Moderator: Reverend Gordon Henderson, S.J.
Assistant Moderator: Reverend Paul J. Casey, S.J.

College Organizations

PURPOSE

The University of Scranton encourages extracurricular organizations as important factors in collegiate life, developing the social side of a student's character, exercising his abilities and furnishing opportunities for the development of initiative and leadership. These activities are part of the life of the collegiate community and ought to be part of the life of every student. Therefore, every student will be urged to participate in one or more of these activities to the extent that his scholastic standing will permit.

ALPHA SIGMA NU

Alpha Sigma Nu is a National Honor Society with chapters in various Jesuit Colleges and Universities throughout the United States. It is a society organized to honor students who have distinguished themselves in scholarship, service and loyalty to their college. Candidates are drawn from the Junior Class and are nominated by the local chapter, which also certifies the qualifications of the nominees. Those who are approved by the President of the University and the Dean are elected members and initiated into the organization.

Moderator: Reverend William G. Kelly, S.J.

ALUMNI SOCIETY

The University Alumni Society has been formed to perpetuate friendships formed at the University, to foster among its members a spirit of loyalty to their Alma Mater and to extend the influence and advance the interests of the University. Regular meetings and reunions are held from time to time as prescribed in the rules and by-laws of the Society.

President: Robert E. O'Brien, Esq.
Vice-President: Mr. Joseph Lynott
Secretary: Mr. Edwin R. Smith
Treasurer: Mr. John J. Haggerty
Executive Secretary: Mr. John R. Gavigan
Moderator: Reverend Frank McG. Nugent, S.J.

THE AQUINAS

The Aquinas is a newspaper published twice a month during the course of the school year by the students of the University. Its purpose is to foster the development of literary expression among the students, to afford a practical training in Journalism and to chronicle the events of University life.

Moderator: Reverend Herbert S. J. Baum, S.J.

ATHLETIC ASSOCIATION

General Policies

The University of Scranton engages in intercollegiate athletics because of a deep conviction that when properly administered they are an integral part of the total educational services of the institution. The University encourages and offers the opportunity of participation in intercollegiate athletics to all students. The academic life of the boy is, however, of primary importance. The University of Scranton abides by both the statement of policies and principles and the rules of eligibility of the N.C.A.A. and the E.C.A.C. for the conduct of intercollegiate athletics.

Objectives

1. To improve students physically and develop qualities of leadership.

2. To bind together the student body, stimulate school spirit and instill into the student a desirable sense of loyalty.

3. To integrate the athletic program with the general public relations of the University.

4. To arrange and play an intercollegiate schedule commensurate with Scranton's size, academic standards, aspirations and principles and policies.

5. To integrate the athletic program with the general University program so that there is a balance between the focus of

attention on athletic events and the focus of attention on other types of events.

Faculty Moderator: Reverend John P. McNicholas, S.J.
Coach of Football and Director of Physical Education: Mr. Peter A. Carlesimo
Coach of Basketball: Mr. Fiore Cesare
Coach of Baseball: Mr. William Gilvary

THE ART CLUB

The Art Club fosters an appreciation of the fine arts. The members sponsor exhibitions and concerts, and hold studio periods for exploring the various art media.

Moderator: Mr. Lawrence A. Mann

THE AVIATION CLUB

The purpose of this club is to increase the knowledge of and interest in aviation, and to promote social contact among the students having a common interest in aviation. The Aviation Club functions throughout the school year and is open to all interested students.

Moderator: Mr. Andrew W. Plonsky

THE UNIVERSITY BAND

The University Band is open to any student with an aptitude for music. The band plays at many of the athletic contests, various University exercises and gives an annual concert. Active members in the band are eligible for the school letter after one year and the gold award after two years.

Moderator: To be appointed
Director: Mr. Mario Chemi

BIOLOGY CLUB

This organization enables students majoring in Biology and more intensely interested in the Biological Sciences to extend their education beyond the limits permitted by classroom work. Stu-

dents meet, at least twice monthly, for discussion of current biological problems; guest speakers are invited; movies are shown; social affairs are conducted; *Bioscript* is published twice yearly for the benefit of students and alumni; members engage in various projects for the benefit of the department, school and community.

Moderator: Dr. Leonard N. Wolf

THE BUSINESS CLUB

The Business Club, composed of graduates and students who are interested in Business Administration and Accounting, affords its members closer contacts with actual business practices and acquaints them with both local and national business executives and firms. Meetings are held each week and each month a dinner meeting is held at which prominent guest speakers from the field of business are presented to the club. Field trips to local and distant industries are another activity of this organization.

Moderator: Mr. John P. McLean

Spiritual Moderator: Reverend Gordon Henderson, S.J.

UNIVERSITY OF SCRANTON CHAPTER

Student Affiliates, American Chemical Society

To keep abreast of developments and improve their perspective in the ever-growing field of chemistry, undergraduates in the chemistry major curriculum became affiliated with the American Chemical Society, a national professional organization, thereby gaining recognition collectively as the University of Scranton Chapter of Student Affiliates.

Objectives of the organization are: to encourage in the broadest and most liberal manner the advancement of chemistry in all branches; to promote research in chemical science and industry; the improvement of the qualifications and usefulness of chemists through high standards of professional ethics, education and attainments; the increase and diffusion of chemical knowledge; and by its meetings, professional contacts, and reports to promote scientific interests and inquiry.

Moderator: Mr. Umbay Burti

COUNCIL OF DEBATE

The University of Scranton Council of Debate offers its members the opportunity to train themselves in public speech and informal debate. Besides the regular weekly debate at the University, the debaters present a program each Thursday over Station WEJL, in which they discuss topics of vital interest to the world. Other activities of the Council of Debate are intercollegiate debates and the annual oratorical contest. The Council is a member of the NFCCS and the National Forensic Commission.

Moderator: Reverend William H. Osterle, S.J.

DEUTSCHER KREIS

The Deutscher Kreis is open to all students at the University who are particularly interested in increasing their proficiency in the use of the German language and in acquiring a better understanding of the culture and civilization of the people whose language they are studying.

Moderator: Dr. Antanas Kucas

THE ECONOMICS CLUB

This organization restricts its membership to students who are majoring in Economics. Its objective is to promote interest in economic theory and problems by providing the opportunity for discussion groups to function most profitably. In addition, the group plans to sponsor field trips and to conduct economic research projects of general as well as of local interest.

Moderator: Mr. Thomas Sheehan.

UNIVERSITY OF SCRANTON CHAPTER

Student Education Association of the Pennsylvania State Education Association

The Student Education Association is an undergraduate Education Club for future teachers at the elementary and secondary school levels. It is a professional organization affiliated with the Pennsylvania State Education Association and has as one of its objectives the professional betterment of the present and future

teacher. The Club also offers the Education student closer contact with teaching and school practices than can be afforded in the classroom, as well as an opportunity to become personally acquainted with distinguished educators.

Moderator: Dr. Lawrence J. Lennon

LE CERCLE FRANCAIS

Le Cercle Francais is open to all students of the University who are particularly interested in increasing their proficiency in the use of French language and in acquiring a better understanding of the culture and civilization of the people whose language they are studying.

The club activities stress the importance of French culture in the development of modern society. Weekly meetings conducted in French are devoted to discussions of various phases of French civilization and literature. The Cercle encourages the exchange of letters with French and Canadian correspondents, thereby cementing friendly relationship between countries. The Cercle also sponsors occasional guest speakers.

Moderator: Mr. John McKenna

THE GREEK CLUB

The Greek Club is an academic organization open to all the students of the University. Its purpose is to acquaint its members with various phases of Greek culture in their relationship to present-day civilization. The club affords a fine opportunity of supplementing one's education with a study of the rich culture of ancient Greece, the cradle of Western civilization.

Moderator: To be appointed

THE LOYOLANS

The Spanish Club is an organization composed of students of the University who are interested in the study of Spanish. The objectives of the club are to acquaint the members with the written and spoken language and to study the life, literature and culture of the Spanish-speaking countries.

Meetings are held monthly in the Arts Building. Several social gatherings are held during the scholastic year. The annual Spanish Fiesta is the organization's outstanding social event of the year.

Moderator: Mr. Frank A. Cimini.

UNIVERSITY OF SCRANTON CHAPTER
SOCIETY FOR ADVANCEMENT OF MANAGEMENT

The University of Scranton Chapter of the Society for Advancement of Management is an organization composed of students of the University who are interested in Business Administration and in particular, Management. The specific purpose of this Society is through research, discussion, publication, and other appropriate means to conduct and promote scientific study of the principles governing organized effort in industrial and economic life, and in general to advance the science of management for the benefit of society as a whole.

Meetings are held each week in the Business Building. Monthly dinner meetings are held in conjunction with other members of the Northeastern Pennsylvania Chapter, at which prominent guest speakers in the field of management are presented, providing the membership with an opportunity for personal contact with local and national business executives. Other private functions are conducted regularly.

Student Chapter Co-ordinator: Mr. Joseph Artabane

RESIDENT STUDENTS' CLUB

Founded in 1947, this club is designed to aid the student from out of town in supplementing the regular extracurricular activities at the University with special programs of an intellectual, artistic or social nature to meet his special needs.

Moderator: Reverend Paul Casey, S.J.

THE PERSHING RIFLES

The Pershing Rifles is a national ROTC society with member companies in various colleges and universities throughout the United States. The society was formed at the University of

Nebraska in 1892 by Lt. John J. Pershing from whom the society has since taken its name. The aims of the society are to encourage, preserve and develop the highest ideals of the military profession and to promote American Citizenship. Membership is open to ROTC cadets who have the necessary scholastic, drill, and leadership ability.

Moderator: To be appointed

THE PHILOSOPHY CLUB

The Philosophy Club was established as the outgrowth of informal gatherings of students interested in philosophical subjects. Informal discussions are held at the club meetings as a means of helping the members acquire a knowledge of and a facility in speaking about philosophical subjects. While any interested student of the University may become a member, practically all members are Juniors or Seniors, since the philosophy courses are given in those years.

Moderator: Reverend Richard McSorley, S.J.

THE PHYSICS CLUB

The Physics Club is primarily an organization for those students who are majoring in the science of Physics. The membership is also open to those who are studying Physics and wish to extend their understanding of this science. The purpose of the Physics Club is to afford the members opportunities to become more familiar with the activities of physicists, the applications of physical principles and the outstanding developments in the field of physics.

Moderator: Dr. Joseph P. Harper.

UNIVERSITY PLAYERS

The Undergraduate Dramatic Society of the University of Scranton is the University Players, under whose sponsorship the program of University Dramatic Productions on stage and radio is presented. Membership in the University Players is restricted to students who have taken active part in the annual productions on stage and radio. Freshmen serve as apprentice members dur-

ing their first year. Actual participation in the program of productions, however, is not limited exclusively to members of the University Players, but is open to all students of the University Day and Evening classes. Meetings of the University Players are held twice monthly and consist of a planned program of lectures and discussions on playwriting, stagecraft, production and design.

Moderator: Reverend Henry Erhart, S.J.

Coach: Mr. James Langan

POLITICAL SCIENCE CLUB

The Political Science Club is composed of students who are actively interested in the nature, functions and problems of our American government. It conducts seminars and debates on current issues and runs model legislatures, both state and national. The emphasis is on active student initiative and participation on projects that are real issues for the country at large.

The club is affiliated with the Intercollegiate Conference on Government which is composed of representatives from all the major institutions of higher learning in the Commonwealth of Pennsylvania. Each year the Conference sponsors a meeting of all its units, usually in Harrisburg, where the students simulate model legislatures, model constitutional or nominating conventions, or model United Nations Assembly. In addition radio forums and joint meetings with other northeastern colleges are sponsored by the club.

The club is also affiliated with the international relations clubs of the Carnegie Foundation for International Peace and conducts joint meetings with the Marywood International Relations Club.

Moderator: Mr. Timothy Scully

THE PSYCHOLOGY CLUB

The Psychology Club affords an opportunity for students majoring in psychology, and others interested in the problems of the field, to meet periodically. Meetings generally feature guest speakers, psychological films or demonstrations, field trips, etc. At least one dinner meeting is held annually. The club maintains

an up-to-date file of approved graduate schools in psychology, and publishes a mimeographed newsletter of club activities. Only psychology majors may hold office, but any students are welcome as members.

Moderator: Mr. Paul J. Lilly

THE UNIVERSITY SINGERS

The University Singers affords students with sufficient vocal talent an opportunity to develop this talent with practice in choral singing. During the year the University Singers appear in connection with various University exercises and give occasional concerts. Active members in the Glee Club are eligible for the school letter after one year and the gold award after two years.

Moderator: Mr. John D. Sweeney, S.J.

Director: Norbert K. Betti.

SOCIAL SCIENCE CLUB

The purpose of this organization is to afford students an opportunity to participate in recreational and group activities with institutionalized children and adults; to perform sociological research of benefit to the community; to broaden the student's training in the social sciences.

Moderator: Mr. John J. Baldi.

STUDENT COUNCIL

The management of extracurricular and social activities at the University is placed in the hands of the Student Council. The range of its duties includes the preparation of the social calendar, the running of assemblies, the supervision of elections, the initiation and promotion of all kinds of student endeavor and the observance of college traditions.

Moderator: Reverend James H. Donahoe, S.J.

THE WINDHOVER

The Windhover is the annual Year Book publication of the students of the University. Its aim is to serve as a record of the school year and as a memorial of the Senior Class.

Moderator: Reverend Bernard A. Suppe, S.J.

THE RADIO GUILD

The University of Scranton operates its own non-commercial educational FM broadcast station, WUSV, which recently moved into newly designed and equipped studios atop the new Science Building. Fully equipped with modern broadcast equipment, including auxiliary amplifiers and recorders for remote pick-ups, the radio station serves as the focal center of the Radio Guild, a student organization which staffs and operates the station as announcers and engineers under faculty direction. Students serving on the Radio Station are selected by examination after apprenticeship training and find this extracurricular experience a valuable training facility for communications work. Full membership in the Radio Guild entitles the student to wear the lapel insignia of WUSV.

Moderator: Reverend R. F. Grady, S.J.
Chief Engineer: John P. McGoldrick, B.S.

Scholarships

Among the many needs of the University none is of more importance than the foundation of scholarships to meet the increasing number of requests from students of exceptional ability, who without financial aid are unable to secure the advantages of a college education. To found a full scholarship requires the sum of $15,000; partial scholarships can also be established by smaller gifts. Each scholarship will bear and perpetuate the name of the donor or the person designated by him. All scholarships, full or partial, are accepted with the understanding that the income from the sum will be the amount applicable to the holder of the scholarship.

SCHOLARSHIP APPLICATIONS

Applications for all non-competitive scholarships must be in the hands of the Scholarship Committee by May 1st. The application forms may be obtained from the Registrar's Office at the University.

To obtain a non-competitive scholarship, sufficient need must be established and high scholastic attainment demonstrated. For prospective Freshmen this attainment is judged on the basis of their position in their class in the Senior year of high school and from the results of the aptitude and content tests administered by the Guidance Department of the University. Upperclassmen are judged on their quality point index. The applicant will also be required to appear for a personal interview before the Scholarship Committee in May. The decision of this Committee is final. Any non-competitive scholarship grant is made for only one year at any time. The student must re-apply each year. Students holding a partial scholarship will pay the amounts their scholarships fall short of the full tuition. Books, fees, boarding and other incidental expenses are not included in any scholarship. The following scholarships are available:

COMPETITIVE SCHOLARSHIPS

The University of Scranton offers ten (10) scholarships to high school graduates of highest ability and achievement. These scholarships range in value from $800 to $2200, and are awarded on the secondary school record, the Principal's recommendations and on the results of competitive examinations given in the spring semester under the following plan:

A. For the initial screening of all competitors a single test of scholastic aptitude will be given in the various high schools. This examination requires no special preparation. It is approximately one hour in length and is a test of linguistic and quantitative aptitude. On the basis of these test scores the highest-ranking students are determined.

B. The highest ranking students selected under part A are given a general achievement test battery for final selection. Finalists are determined on the basis of the ten highest aggregate scores on this battery.

Announcement of the winners will be made as soon as possible after the completion of testing and the ten scholarships distributed as follows:

Two four-Year Scholarships worth $550 a year. Total value—$2200 each.

Two Four-Year Scholarships, each worth $300 a year. Total value—$1200 each.

Balance: Six Four-Year Scholarships, each worth $200 a year. Total value—$800 each.

The retention of the scholarship is conditioned upon a maintenance of a B average.

Interested students from schools not visited by a scholarship representative may obtain further details by consulting your high school principal or writing to the Registrar of the University.

PURPLE CLUB SCHOLARSHIPS

The Purple Club is an organization dedicated to providing educational opportunities for deserving young men from the Lackawanna Valley. Annually they provide partial tuition assistance totaling approximately $12,000 to over fifty young men. Application should be made to the Registrar.

THE MARTHA FITCH SCHOLARSHIP FUND

Through the generous bequest of Miss Martha Fitch, a fund in excess of $300,000, the income of which is to be used to assist in defraying tuition expenses for students who manifest need and ability, has been made available.

WORK OPPORTUNITIES

Tuition aid in amounts up to half tuition. The student is assigned to assist in various University departments. Over sixty (60) such work opportunities are provided annually.

LEADERSHIP GRANTS

These are partial scholarship grants awarded those who manifest need, the required intellectual ability and outstanding qualities of leadership.

THE FOWLER AND WILLIAMS SCHOLARSHIP

This grant is made by the company of that name and consists in two full scholarships for one year. Each year it is given anew.

STUDENT LOANS

A University fund, from which loans for tuition are made to deserving students, normally in the upper classes. Loans carry an interest charge and are to be repaid by the student after completion of his education, beginning six months after gainful employment has been secured.

UNICO CLUB

The UNICO Club of Scranton each year provides one four-year scholarship valued at $2,200 to a boy from Lackawanna County. Students are chosen on the basis of scholastic achievement and need.

GIFTS AND BEQUESTS

Gifts to the University may take the form of funds for the establishment of scholarships or professorships; or the foundation of medals and other prizes; of additions to the material equipment; of collections of educational value; of contributions to the general fund, or may be undesignated. Those desiring to make a bequest to the University of Scranton may be helped by the following suggested form:

FORM OF BEQUEST

I give (devise) and bequeath to the University of Scranton, an institution incorporated under the laws of the Commonwealth of Pennsylvania and located in Scranton, Pennsylvania, and its successors forever the sum of .....dollars (or otherwise describe the gift) for its general corporate purposes (or name a particular corporate purpose).

ANNUAL COMMENCEMENT
UNIVERSITY OF SCRANTON

June Second

nineteen hundred fifty-seven

Program

Processional March—Marche Militaire Francaise....*Saint-Saens*

Star Spangled Banner .....Audience

Invocation—Veni Creator .....The Graduates

Conferring of Honorary Degrees

Selection—Italian in Algeria .....*Rossini*

Presentation of Candidates for Degrees in Course

In the Graduate Division.....Dean, Edward J. Sponga, S.J.
In the College.....Dean, William G. Kelly, S.J.

Conferring of Degrees in Course by the President of the University

Selection—Intermezzo from Leo Delibes Ballet *Nailia*

Conferring of Commissions
Department of Military Science and Tactics

Report of the President.....Very Reverend John J. Long, S.J.

Benediction

Benediction

His Excellency, The Most Reverend Jerome D. Hannan, D.D.
Bishop of Scranton

Recessional March—Stars and Stripes.....*Sousa*

HONORARY DEGREES

— ★ —

DOCTOR OF LAWS

The Most Reverend Henry Theophilus Klonowski
Thomas Francis Murphy
Marion Margery Scranton

— ★ —

DEGREE CANDIDATES — JUNE, 1957

MASTER OF ARTS

MAJOR: EDUCATION

Reverend Richard Henry Allen, M.M.
Minor Seminary Education and the Papal Documents"

Joseph William Carlin
"*The Seventh Cardinal Principle*"

Margaret Mary McGuire
"*The Changing Concept of the Term Discipline*"

— ★ —

MASTER OF SCIENCE

MAJOR: EDUCATION

Edmund Thomas Bojnowski
Florence Sophie Bujno
Gaetano Joseph Comaratta
William Henry Dunstone
Frank Peter Florey
Anne Margaret Hatala
Loretta Elizabeth Hennigan
Frederick W. Ilges
Charles Thomas Kondrat
Leonard Krieger
Sabina E. Krutul
Thomas Michael Lacina
Reverend John Patrick Martin
Shirley Ann McCarthy
Albert William Panaci
Ronald Joseph Perry
Santo Samuel Rizzo
Patrick Maurice Walsh
William J. Williams

— ★ —

BACHELOR OF ARTS

MAJOR: CLASSICS AND LITERATURE

Stanley Walter Boland, Jr.
Angelo James Cefalo
Gerald William Chichurka, *cum laude*
Robert E. Clancy
Bernard Francis Dick, *summa cum laude*
Paul Charles Moffitt, *cum laude*
Ambrose Joseph Mullen
Robert Ryan Newton, *summa cum laude*
John Francis O'Malley
Ira Sterling Ross
Walter Edward Smith

BACHELOR OF SCIENCE

Major: English and Social Studies

David Joseph Alubowicz
Gerard Joseph Barrett
John Louis Caprari
Paul Joseph Carroll
Richard Joseph Castelli
Emilio Rocco Ceres
Bruce Thomas Chandlee
Thomas James Cichon
Gerard William Connerton
David Allen Crothamel
Joseph Angelo DiNicola, *cum laude*
John William Farrell
James Francis Flynn, *cum laude*
Walter Michael George
Frank James Germain
George Lawrence Gleason, *cum laude*
Eugene A. Higgins
Raymond Leonard Hodakoski
Martin Patrick Judge
John Louis Just
William Keisling III
Bernard Joseph Koslowski
John Joseph Kuratnick
Fred Seymour Lewenson, *cum laude*
John Robert Lewis
Malcolm Roy Maguire
Andrew Charles Mazzarella
Timothy Joseph McGovern
Lawrence James McGroarty
Patrick Joseph McNulty
Edward Francis Meskunas
Francis Aloysius Moran
John Paul Muldowney, *cum laude*
John Francis Murphy, Jr.
Robert Leonard Naparsteck, *magna cum laude*
Samuel Michael Naples
Robert Grover Nesbit
Robert Francis Noto
James Patrick O'Boyle
Michael Gerald O'Brien, Jr.
Peter Tod O'Malley
Joseph John Pajuf
Edward Joseph Pawlak
Rocco Ross Policare
James Richard Powell
Thomas Francis Powell, Jr., *cum laude*
Stephen Robert Rabel
Eugene John Riley, *cum laude*
John Roman
Michael A. Rosipko
Anthony Thomas Ruggiero
Clement Joseph Russavage
Roland Salamon
Gabriel Scioscia
Robert Clarence Shaw
Joseph Michael Sirotnak, *magna cum laude*
Warren Arthur Sloat, *magna cum laude*
Daniel John Stankiewicz
Anthony Telep
John Lawrence Thomas
Edward Louis Vogue
Thomas Joseph Walsh
John Arthur Wargo, *cum laude*
Robert Ralph Zigmont

BACHELOR OF SCIENCE

MAJOR: PHYSICAL AND BIOLOGICAL SCIENCES

John Joseph Alpaugh
William John Antognoli, *magna cum laude*
John Robert Appert
Angelo Joseph Arabio
Edward Balish
Gerard Paul Becker
Joseph John Biga
Joseph Nunzio Bruno, *cum laude*
John Joseph Burns
Richard Jude Burns
John Francis Callahan
Earl Hugh Campbell
John Joseph Capone
James Joseph Carroll, *cum laude*
Walter John Cegelka, Jr., *cum laude*
Peter John Cera, *magna cum laude*
Peter Michael Chairge
Ernest Frederick Chapman
Joseph Thomas Chikowski
James Michael Cifersky, *cum laude*
Donald Edward Collins, *cum laude*
John Joseph Corcoran, *cum laude*
John Julio Costanzi, *magna cum laude*
Angelo Arthur Costanzo
Francis Morgan Cox, *cum laude*
Ramon John Deeb, *magna cum laude*
Robert Francis Duffy, *magna cum laude*
Paul Arthur Farrell
Robert Anthony Feeney, *cum laude*
Atopere Sandy Filippini
Robert Frank Fosko
Joseph Angelo Genuario
Donald Frederick Gumpert
Carl I. Hopf
Joseph John Jankowski, Jr., *cum laude*
John Joseph Jordan
William Ralph Kruzel
Joseph John Lantolf
John Peter Lesniak, *cum laude*
Thomas Edward Lucas
Anthony John Madera
Anthony Francis Mantione
Donald John Marinchak
Mario Anthony Marsico
Thomas John McDonald
Robert Peter McKinnon
Joseph Phillip Merlo, *cum laude*
Alexander Paul Mickiewicz
John Thomas Molenda
William Paul Morris
Joseph James Mowad, *magna cum laude*
Joseph Anthony Noto, *magna cum laude*
John Perkins Reinhardt, *cum laude*
Robert Emmett Ruane, *magna cum laude*
Joseph Clement Ruda
Carl John Sieracki
David Bernard Skibbs
Donald Arnold Swetter, *magna cum laude*
Richard Carl Tagler, *cum laude*
Robert Joseph von Ahnen, *cum laude*
Raymond James Walker
John Carlisle Wall
Thomas Joseph Walsh
Henry Leonard Wisniewski
Anthony Francis Witkowski
Robert Francis Wren
Joseph John Wycallis

BACHELOR OF SCIENCE

Major: Business Administration

Marvin Joseph Barnes
John Michael Boland
Ralph Herbert Bosley
James Charles Bradley
James Edward Burke
John James Burke, *cum laude*
Leo Benedict Burke, *cum laude*
Sylvester Theodore Chapa, *magna cum laude*
Daniel James Chechele, *magna cum laude*
Louis John Cichon
Thomas Francis Conlon
William Joseph Connor, Jr.
James Henry Davey
James Anthony Dirlam
Paul John Dougherty
Paul S. Dudzik, *magna cum laude*
John Donald Duffy
Harry Ellowitz
William Evans, Jr.,*cum laude*
John Joseph Farrell, Jr., *cum laude*
Arthur Joseph Ferguson
John James Ferraro, Jr., *cum laude*
Joseph Patrick Flynn
Thomas Joseph Foley III
Neil Anthony Gallagher
Robert Michael Gilroy, *cum laude*
Edward John Griscavage *magna cum laude*
John Joseph Heaney
Edward Joseph Henry
Robert Gerard Hopkins
Daniel Jacobs
Eugene M. Jubinsky, *cum laude*
Donald Peter Judge
Edward William Kelly
James Lawrence Kinney
Raymond Paul Klimkosky, *cum laude*
Michael Paul Kulick
George Thomas Lally
John Donald Langan
Donald Lositski
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DEPARTMENT OF MILITARY SCIENCE AND TACTICS

WESLEY A. KEYSON, LT. COLONEL, U. S. A.

Commandant, Army Reserve Officers' Training Corps

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